TEST REPORT

Applicant Name:	GUANGZHOU YOKO ELECTRON CO.,LTD
Address:	1 Room301,7th Huanbaosan Rd., Xintang Town, Zengcheng District, Guangzhou City 511340
Report Number:	2504X28433E-RF-00B
FCC ID:	2BSR3TC6

Test Standard (s)

FCC PART 15.247

Sample Description

Product Name:	Mobile Data Terminal
Model No.:	TC60 (Am)
Trade Mark:	N/A
Date Received:	2025-07-28
Report Date:	2025-11-25

Test Result:	The EUT complied with the standards above.

Prepared and Checked By:

Roger Ling

Roger Ling
EMC Engineer

Approved By:

Bob. Liao

Bob.Liao
EMC Engineer

Note: This report must not be used by the customer to claim product certification, approval, or endorsement by A2LA, or any agency of the Federal Government.
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.
This report cannot be reproduced except in full, without prior written approval of the Company. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. This report is valid only with a valid digital signature. The digital signature may be available only under the Adobe software above version 7.0.

TABLE OF CONTENTS

DOCUMENT REVISION HISTORY **4**

GENERAL INFORMATION **5**

PRODUCT DESCRIPTION FOR EQUIPMENT UNDER TEST (EUT) 5
OBJECTIVE 5
TEST METHODOLOGY 5
TEST FACILITY 6
MEASUREMENT UNCERTAINTY 6

SYSTEM TEST CONFIGURATION **7**

DESCRIPTION OF TEST CONFIGURATION 7
EUT EXERCISE SOFTWARE AND POWER LEVEL# 7
SPECIAL ACCESSORIES 7
EQUIPMENT MODIFICATIONS 7
SUPPORT EQUIPMENT LIST AND DETAILS 8
EXTERNAL I/O CABLE 8
BLOCK DIAGRAM OF TEST SETUP 8

SUMMARY OF TEST RESULTS **10**

TEST EQUIPMENT LIST **11**

RF EXPOSURE **12**

APPLICABLE STANDARD 12
TEST RESULT 12

ANTENNA REQUIREMENT **13**

APPLICABLE STANDARD 13
ANTENNA CONNECTOR CONSTRUCTION 13

AC LINE CONDUCTED EMISSIONS **14**

APPLICABLE STANDARD 14
EUT SETUP 14
EMI TEST RECEIVER SETUP 14
TEST PROCEDURE 14
CALCULATION 15
TEST DATA 15

RADIATED SPURIOUS EMISSIONS **18**

APPLICABLE STANDARD 18
EUT SETUP 18
EMI TEST RECEIVER & SPECTRUM ANALYZER SETUP 19
TEST PROCEDURE 20
CALCULATION 20
TEST DATA 21

6 dB EMISSION BANDWIDTH & OCCUPIED BANDWIDTH **61**

APPLICABLE STANDARD 61
TEST PROCEDURE 61
TEST DATA 61

MAXIMUM CONDUCTED OUTPUT POWER **62**

APPLICABLE STANDARD 62
TEST PROCEDURE 62
TEST DATA 62

CONDUCTED SPURIOUS EMISSION 63
APPLICABLE STANDARD 63
TEST PROCEDURE 63
TEST DATA 63
POWER SPECTRAL DENSITY 64
APPLICABLE STANDARD 64
TEST PROCEDURE 64
TEST DATA 64
DUTY CYCLE 65
TEST PROCEDURE 65
TEST DATA 65
APPENDIX 66
6DB EMISSION BANDWIDTH 67
99% OCCUPIED BANDWIDTH 69
MAXIMUM CONDUCTED OUTPUT POWER 71
POWER SPECTRAL DENSITY 73
CONDUCTED SPURIOUS EMISSION 75
DUTY CYCLE 78
EXHIBIT A-EUT PHOTOGRAPHS 80
EXHIBIT B-TEST SETUP PHOTOGRAPHS 81

DOCUMENT REVISION HISTORY

Revision Number	Report Number	Description of Revision	Date of Revision
Rev.00	2504X28433E-RF-00B	Original Report	2025-11-25

GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

Product Name	Mobile Data Terminal
Tested Model	TC60 (Am)
Voltage Range#	DC 5V from adapter DC 3.85V from rechargeable battery
Adapter Information#	Model: HJ-0502000-US Input: 100-240 V~ 50/60Hz 0.3A Output: 5.0V ⎓2.0A 10.0W

Frequency Range	BLE 1M: 2402-2480MHz, BLE 2M: 2404-2478MHz
Data Rate	1Mbps&2Mbps
Maximum Conducted Output Peak Power (actual test result)	2 dBm
Modulation Technique	GFSK
Antenna Specification#	Internal Antenna: 0.34dBi (It is provided by the applicant.)
Sample Serial Number	3ABN-1 (CE&RE), 3ABO-4 (RF Conducted Test) (Assigned by ATC, Shenzhen)
Sample/EUT Status	Good condition

Objective

This test report is in accordance with Part 2-Subpart J, Part 15-Subparts A and C of the Federal Communication Commission rules.

The tests were performed in order to determine compliance with FCC Part 15, Subpart C, section 15.203, 15.205, 15.207, 15.209 and 15.247 rules.

Test Methodology

All measurements contained in this report were conducted with ANSI C63.10-2020, American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices. And KDB 558074 D01 15.247 Meas Guidance v05r02.

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.

Accredited by American Association for Laboratory Accreditation (A2LA).The Certificate Number is 4297.01.

Measurement Uncertainty

Parameter		Uncertainty
Occupied Channel Bandwidth		5 %
RF Frequency		$0.064*10^{-7}$
RF output power, conducted		0.3 dB
Unwanted Emission, conducted		1.2 dB
AC Power Lines Conducted Emissions		2.7 dB
Radiated Emissions	9kHz - 30MHz	2.1 dB
	30MHz - 1GHz	4.3 dB
	1GHz - 18GHz	4.9 dB
	18GHz - 26.5GHz	5.2 dB
Temperature		1 ℃
Humidity		7 %
Supply voltages		0.4 %

Note: The extended uncertainty given in this report is obtained by combining the standard uncertainty times the coverage factor K with the 95% confidence interval. Otherwise required by the applicant or Product Regulations, Decision Rule in this report did not consider the uncertainty.

SYSTEM TEST CONFIGURATION

Description of Test Configuration

The system was configured for testing in the engineering mode.

For BLE 1M, 40 channels are provided to testing:

Channel	Freq. (MHz)	Channel	Freq. (MHz)	Channel	Freq. (MHz)	Channel	Freq. (MHz)
0	2402	10	2422	20	2442	30	2462
1	2404	11	2424	21	2444	31	2464
...	...	...	...	...	...	...	...
8	2418	18	2438	28	2458	38	2478
9	2420	19	2440	29	2460	39	2480

EUT was tested with Channel 0, 19 and 39.

For BLE 2M, 38 channels are provided to testing:

Channel	Freq. (MHz)	Channel	Freq. (MHz)	Channel	Freq. (MHz)	Channel	Freq. (MHz)
0	2404	10	2424	20	2444	30	2464
1	2406	11	2426	21	2446	31	2466
...	...	...	...	...	...	...	...
8	2420	18	2440	28	2460	37	2478

EUT was tested with Channel 0, 18 and 37.

EUT Exercise Software and Power Level#

Exercise Software:	Testing in the engineering mode.
Power Level:	6

Note: The information in the above table is provided by the applicant.

Special Accessories

No special accessory.

Equipment Modifications

No modification was made to the EUT tested.

Support Equipment List and Details

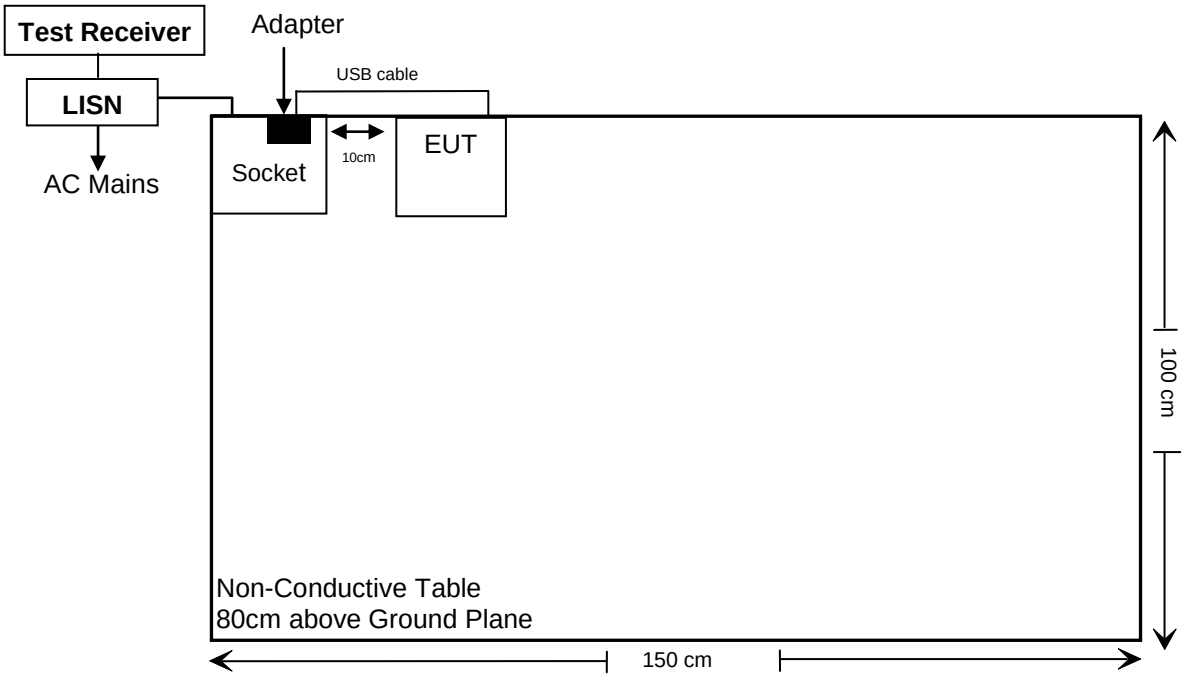
Manufacturer	Description	Model	Serial Number
/	/	/	/

External I/O Cable

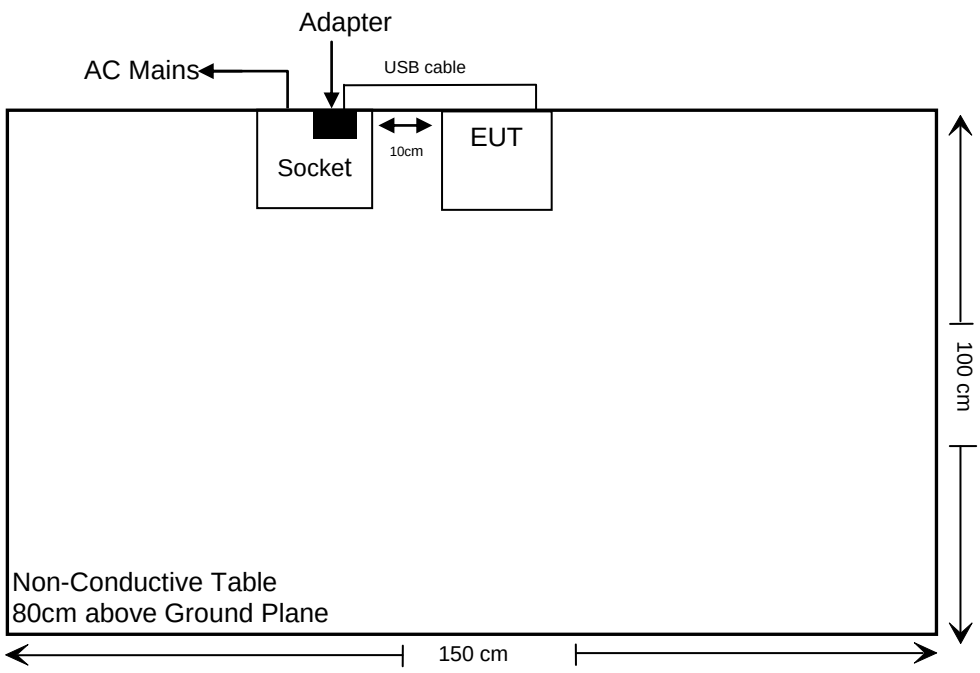
Cable Description	Shielding Type	Length (m)	From Port	To
USB Cable	NO	1.03	EUT	Adapter

Block Diagram of Test Setup

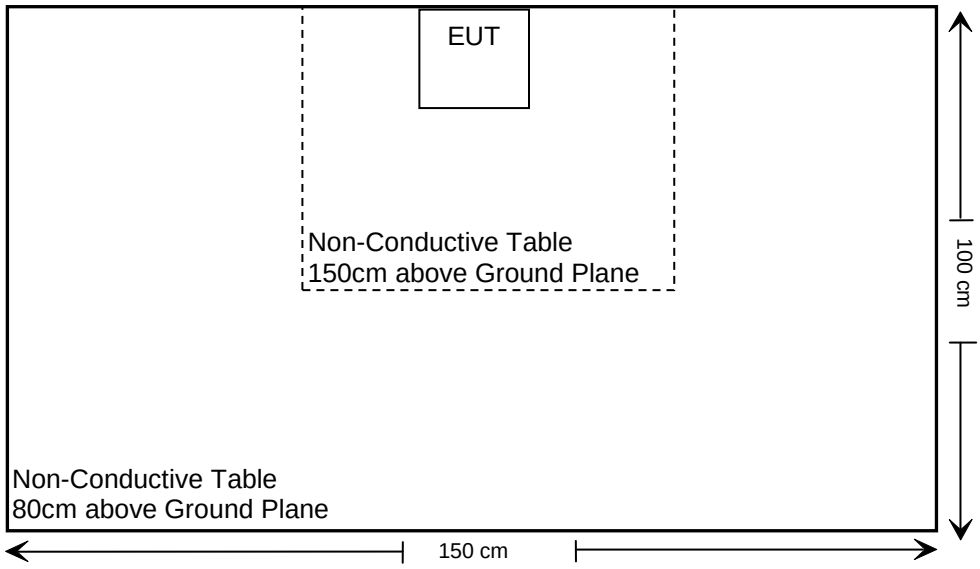
For Conducted Emission:



For Radiated Emission Below 1GHz:



For Radiated Emission Above 1GHz:



SUMMARY OF TEST RESULTS

FCC Rules	Description of Test	Result
§2.1093	RF Exposure	Compliance
§15.203	Antenna Requirement	Compliance
§15.207(a)	AC Line Conducted Emissions	Compliance
§15.205, §15.209, §15.247(d)	Radiated Spurious Emissions	Compliance
§15.247 (a)(2)	6 dB Emission Bandwidth & Occupied Bandwidth	Compliance
§15.247(b)(3)	Maximum Conducted Output Power	Compliance
§15.247(d)	Conducted Spurious Emission	Compliance
§15.247(e)	Power Spectral Density	Compliance

TEST EQUIPMENT LIST

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Conducted Emissions Test					
Rohde & Schwarz	EMI Test Receiver	ESCI	100784	2025/09/17	2026/09/16
Rohde & Schwarz	L.I.S.N.	ENV216	101314	2025/09/17	2026/09/16
Anritsu Corp	50 Coaxial Switch	MP59B	6100237248	2025/09/18	2026/09/17
Rohde & Schwarz	Pulse Limiter	ESH3-Z2	100312	2025/05/30	2026/05/29
Unknown	RF Coaxial Cable	No.17	N0350	2025/05/30	2026/05/29
Test Software: e3 191218 (V9)					
Radiated Spurious Emission Test (Below 1GHz)					
Rohde & Schwarz	Test Receiver	ESR	102725	2025/09/18	2026/09/17
SONOMA INSTRUMENT	Amplifier	310N	186131	2025/03/26	2026/03/25
Schwarzbeck	Bilog Antenna	VULB9163	9163-323	2024/08/08	2027/08/07
Unknown	RF Coaxial Cable	No.12	N040	2025/05/30	2026/05/29
Unknown	RF Coaxial Cable	No.13	N300	2025/05/30	2026/05/29
Unknown	RF Coaxial Cable	No.14	N800	2025/05/30	2026/05/29
BACL	LOOP ANTENNA	1313-1A	3110711	2024/01/16	2027/01/15
Test Software: e3 191218 (V9)					
Radiated Spurious Emission Test (Above 1GHz)					
Rohde & Schwarz	Spectrum Analyzer	FSV40	101949	2025/09/17	2026/09/16
Decentest	Filter Switch Unit	DT7220FSU	DQ77927	2025/09/18	2026/09/17
Decentest	Multiplex Switch Test Control Set	DT7220CSU	DQ77924	2025/09/18	2026/09/17
A.H. Systems, inc.	Preamplifier	PAM-0118	226	2025/03/20	2026/03/19
Schwarzbeck	Horn Antenna	BBHA9120D	837	2023/02/22	2026/02/21
Unknown	RF Coaxial Cable	No.10	N050	2025/05/30	2026/05/29
Unknown	RF Coaxial Cable	No.11	N1000	2025/05/30	2026/05/29
Unknown	RF Coaxial Cable	No.19	N500	2025/05/30	2026/05/29
Schwarzbeck	HORN ANTENNA	BBHA9170	9170-359	2023/12/12	2026/12/11
BACL	Amplifier	BACL-1313-A 1840	4012521	2025/05/30	2026/05/29
Unknown	RF Coaxial Cable	No.15	N600	2025/05/30	2026/05/29
Unknown	RF Coaxial Cable	No.16	N650	2025/05/30	2026/05/29
Test Software: e3 191218 (V9)					
RF Conducted Test					
Rohde & Schwarz	Spectrum Analyzer	FSV-40	101590	2026/09/17	2026/09/16
WEINSCHEL	10dB Attenuator	5324	AU 3842	2025/03/26	2026/03/25
Test Software: JDAutoTestSystem V1.0.0					

*** 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).

RF EXPOSURE

Applicable Standard

According to FCC §2.1093, systems operating under the provisions of this section shall be operated in a manner that ensure that the public is not exposed to radio frequency energy level in excess of the Commission's guideline.

According to KDB 447498 D01 General RF Exposure Guidance

The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:
[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)] · [√f(GHz)] ≤ 3.0 for 1-g SAR and ≤ 7.5 for 10-g extremity SAR, where
1. f(GHz) is the RF channel transmit frequency in GHz.
2. Power and distance are rounded to the nearest mW and mm before calculation.
3. The result is rounded to one decimal place for comparison.
4. When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test Exclusion.

Test result

For worst case:

Frequency (MHz)	Tune-Up Conducted Output Power# (dBm)	Tune-Up Conducted Output Power# (mW)	Distance (mm)	Calculated Value	Threshold (1-g SAR)	SAR Test Exclusion
2440	2.5	1.78	5	0.6	3.0	Yes

Note: The tune-up conducted power is declared by the applicant.

Result: No SAR test is required.

ANTENNA REQUIREMENT

Applicable Standard

According to FCC § 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the user of a standard antenna jack or electrical connector is prohibited. The structure and application of the EUT were analyzed to determine compliance with section §15.203 of the rules. §15.203 state that the subject device must meet the following criteria:

a. Antenna must be permanently attached to the unit.
b. Antenna must use a unique type of connector to attach to the EUT.
c. Unit must be professionally installed, and installer shall be responsible for verifying that the correct antenna is employed with the unit.

And according to FCC 47 CFR section 15.247 (b), if the transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

Antenna Connector Construction

The EUT has one internal antenna arrangement, which were permanently attached to the EUT. The antenna gain is 0.34 dBi#. Fulfill the requirement of this section. Please refer to the EUT photos.

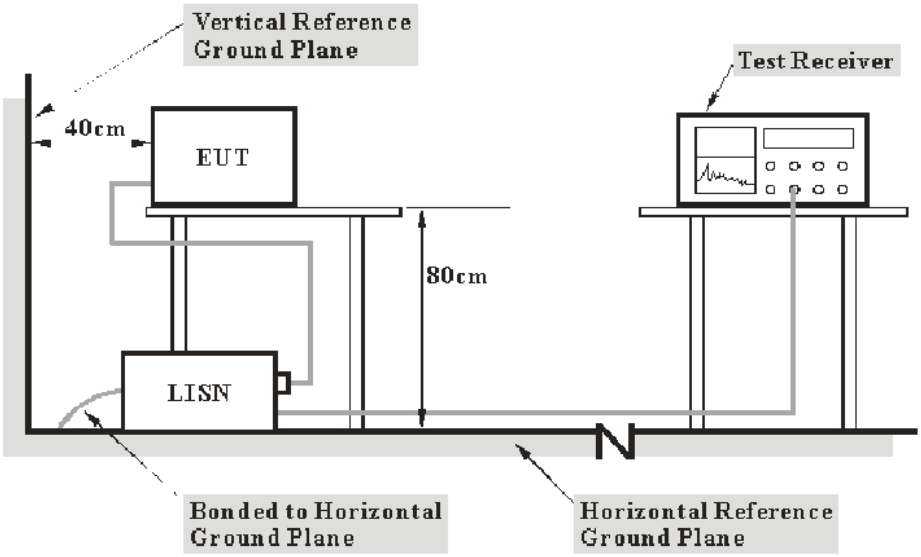
Result: Compliance.

AC LINE CONDUCTED EMISSIONS

Applicable Standard

FCC §15.207(a).

EUT Setup



Note: 1. Support units were connected to second LISN.
2. Both of LISNs (AMN) 80 cm from EUT and at the least 80 cm from other units and other metal planes support units.

The measurement procedure of EUT setup is according with ANSI C63.10-2020. The related limit was specified in FCC Part 15.207.

The spacing between the peripherals was 10 cm.

EMI Test Receiver Setup

The EMI test receiver was set to investigate the spectrum from 150 kHz to 30 MHz.

During the conducted emission test, the EMI test receiver was set with the following configurations:

Frequency Range	IF B/W
150 kHz – 30 MHz	9 kHz

Test Procedure

During the conducted emission test, the adapter was connected to the outlet of the LISN.

Maximizing procedure was performed on the six (6) highest emissions of the EUT.

All final data was recorded in the Quasi-peak and average detection mode.

Calculation

The factor is calculated by adding LISN VDF (Voltage Division Factor) and Cable Loss. The basic equation is as follows:

Factor = LISN VDF + Cable Loss + 10dB Attenuation(Limiter)

The "**Over limit**" column of the following data tables indicates the degree of compliance with the applicable limit. For example, an over limit of -7 dB means the emission is 7 dB below the limit. The equation for calculation is as follows:

Over Limit = Level - Limit
Level = Read Level + Factor

Test Data

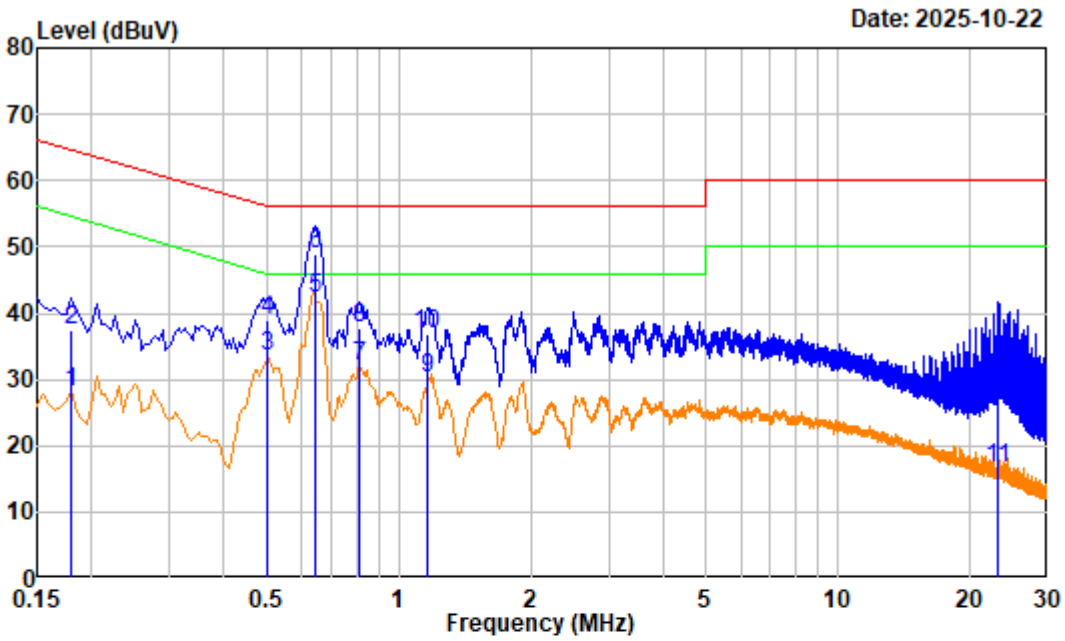
Environmental Conditions

Temperature:	23.6 ℃
Relative Humidity:	45 %
ATM Pressure:	100.7 kPa
Test Engineer:	Jason Fan
Test Date:	2025-10-22
EUT Operation Mode:	BLE Transmitting

Test Result: Compliance, please refer to the below data.

Note: The pre-scan maximum output power mode and channel: BLE 1M Middle Channel was tested.

AC 120V/60Hz, Line:

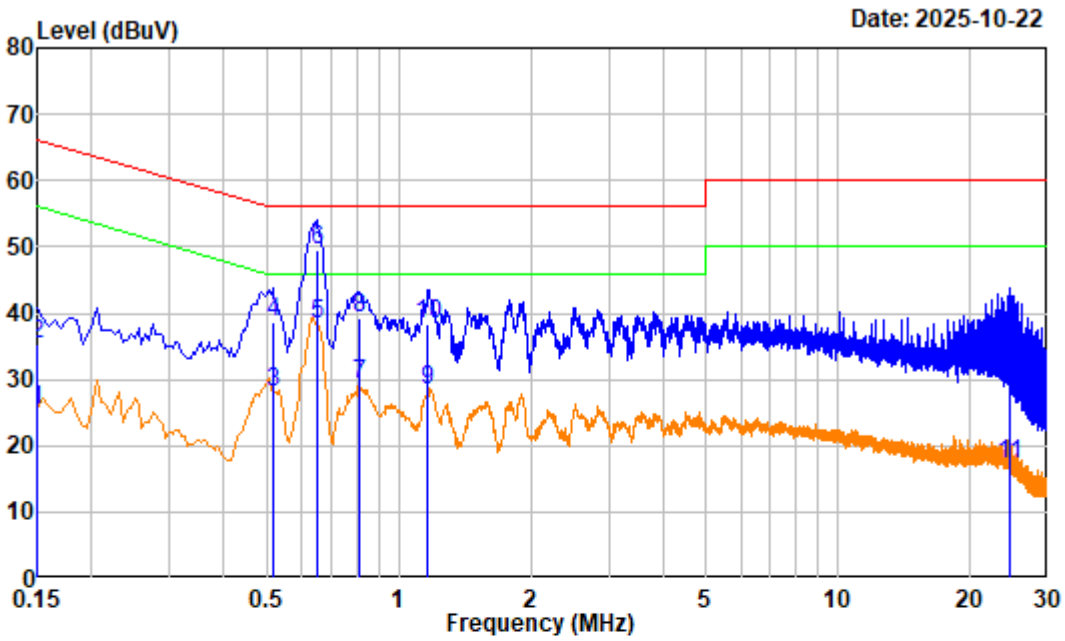


Site : Shielding Room
Condition: Line
Job No. : 2504V28433E-RF
Test Mode: BLE Transmitting
Note : Adapter
Tester : Jason Fan
Setting : IF B/W 9kHz PK/AV

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dBuV	dBuV	dBuV	dB	
1	0.180	19.88	8.20	28.08	54.49	-26.41	Average
2	0.180	19.88	17.47	37.35	64.49	-27.14	QP
3	0.500	19.98	13.51	33.49	46.00	-12.51	Average
4	0.500	19.98	18.88	38.86	56.00	-17.14	QP
5	0.645	20.16	22.16	42.32	46.00	-3.68	Average
6	0.645	20.16	28.63	48.79	56.00	-7.21	QP
7	0.815	20.19	11.86	32.05	46.00	-13.95	Average
8	0.815	20.19	17.64	37.83	56.00	-18.17	QP
9	1.155	20.38	9.66	30.04	46.00	-15.96	Average
10	1.155	20.38	16.36	36.74	56.00	-19.26	QP
11	23.070	24.28	-7.78	16.50	50.00	-33.50	Average
12	23.070	24.28	5.63	29.91	60.00	-30.09	QP

=

AC 120V/60Hz, Neutral:



Site : Shielding Room
Condition: neutral
Job No. : 2504V28433E-RF
Test Mode: BLE Transmitting
Note : Adapter
Tester : Jason Fan
Setting : IF B/W 9kHz PK/AV

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dBuV	dBuV	dBuV	dB	
1	0.150	19.88	5.38	25.26	56.00	-30.74	Average
2	0.150	19.88	15.57	35.45	66.00	-30.55	QP
3	0.515	20.03	8.01	28.04	46.00	-17.96	Average
4	0.515	20.03	18.47	38.50	56.00	-17.50	QP
5	0.650	20.10	18.25	38.35	46.00	-7.65	Average
6	0.650	20.10	29.41	49.51	56.00	-6.49	QP
7	0.810	20.23	8.95	29.18	46.00	-16.82	Average
8	0.810	20.23	18.92	39.15	56.00	-16.85	QP
9	1.165	20.56	7.97	28.53	46.00	-17.47	Average
10	1.165	20.56	17.89	38.45	56.00	-17.55	QP
11	24.610	24.52	-7.21	17.31	50.00	-32.69	Average
12	24.610	24.52	4.70	29.22	60.00	-30.78	QP

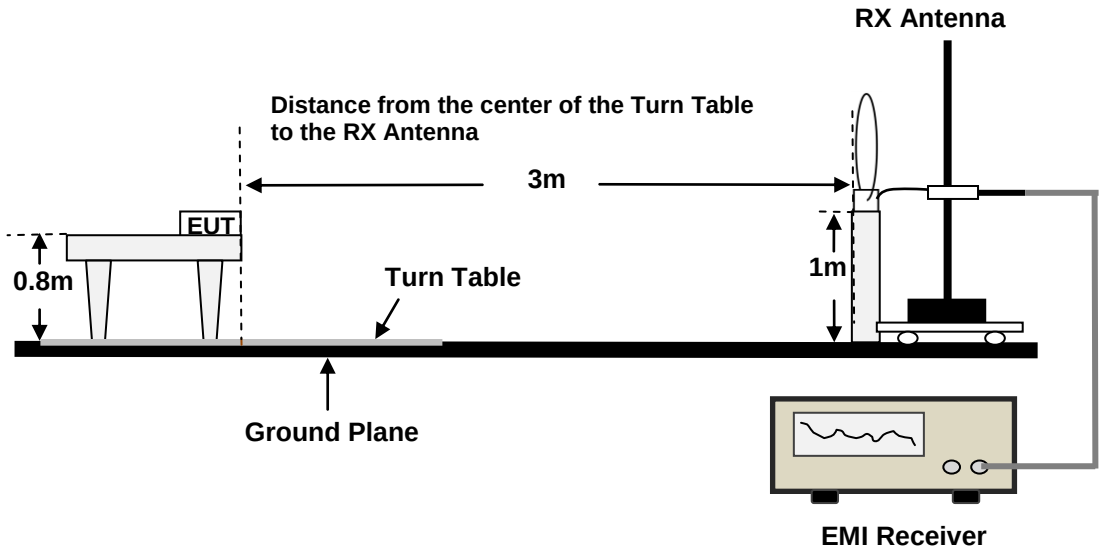
RADIATED SPURIOUS EMISSIONS

Applicable Standard

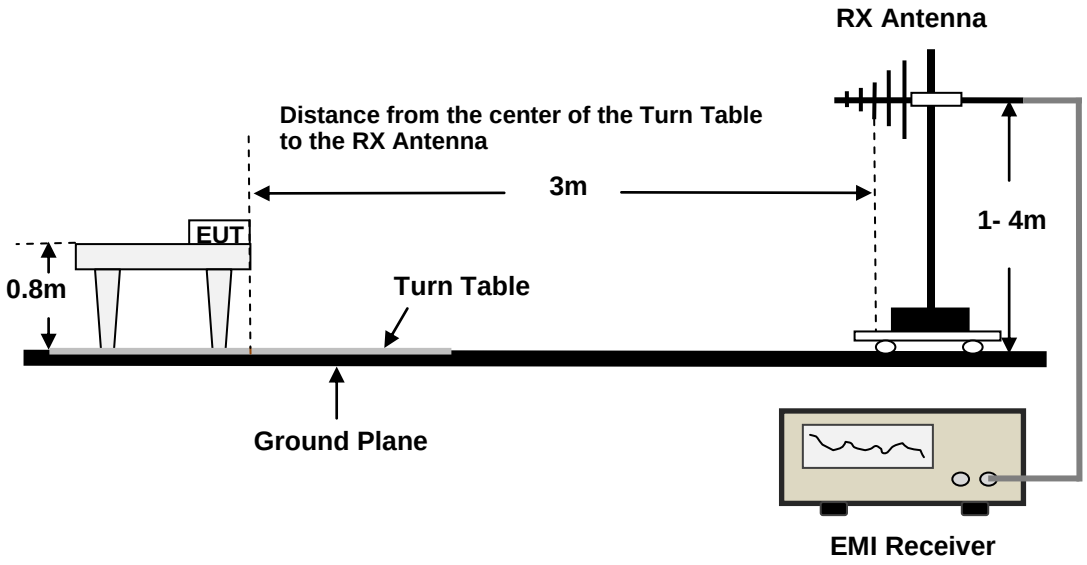
FCC §15.205; §15.209; §15.247(d)

EUT Setup

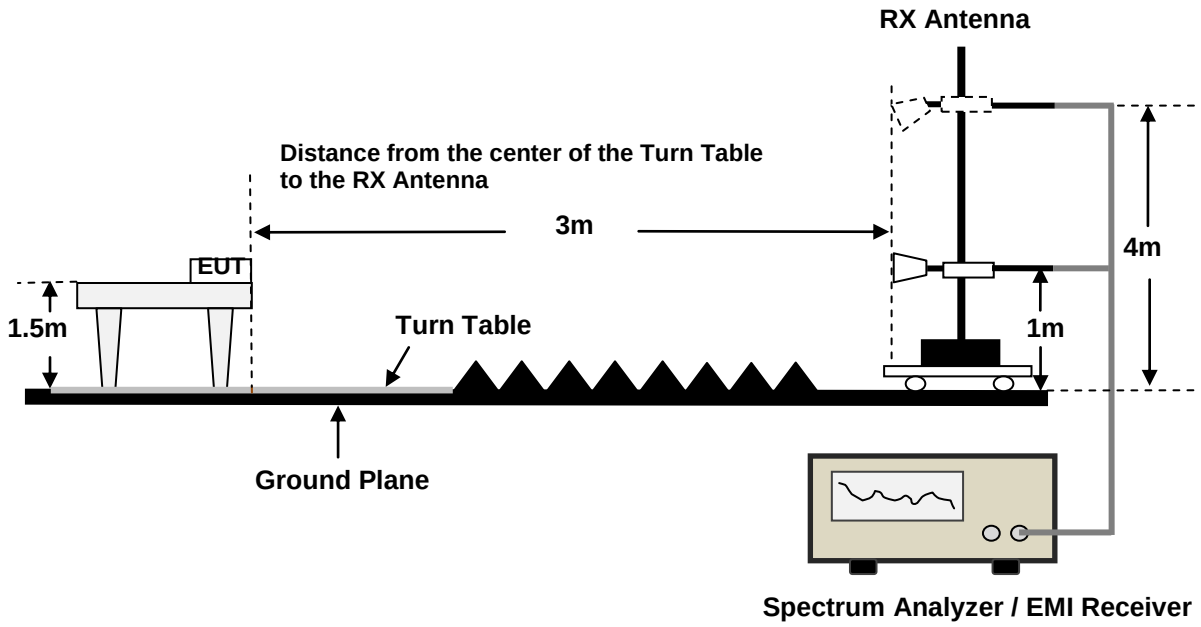
9kHz - 30MHz:



30MHz - 1GHz:



Above 1GHz:



The radiated emission performed in the 3 meters, using the setup accordance with the ANSI C63.10-2020. The specification used was the FCC 15.209, FCC 15.247 limits.

EMI Test Receiver & Spectrum Analyzer Setup

The system was investigated from 9kHz to 25GHz.

During the radiated emission test, the EMI test receiver & Spectrum Analyzer Setup were set with the following configurations:

9kHz - 1000MHz:

Frequency Range	Measurement	RBW	Video B/W	IF B/W	Detector
9kHz - 150kHz	PK	0.3kHz	1kHz	/	PK
	QP/AV	/	/	200Hz	QP/AV
150kHz - 30MHz	PK	10kHz	30kHz	/	PK
	QP/AV	/	/	9kHz	QP/AV
30MHz - 1000MHz	PK	100kHz	300kHz	/	PK
	QP	/	/	120kHz	QP

1GHz - 25GHz:
Pre-scan:

Measurement	Detector	Duty cycle	RBW	Video B/W
PK	Peak	Any	1MHz	3MHz
Ave.	Peak	>98%	1MHz	5kHz
		<98%	1MHz	≥1/T, no less than 5kHz

Final measurement for emission identified during the pre-scan:

Measurement	Detector	Duty cycle	RBW	Video B/W
PK	Peak	Any	1MHz	3MHz
Ave.	Peak	>98%	1MHz	10Hz
		<98%	1MHz	≥1/T

Note 1: T is minimum transmission duration
Note 2: The 1GHz-4GHz testing use the notch filter and the 4GHz-18GHz testing use high-pass filter.
Note 3: The band edge testing use 10dB attenuator.
Note 4: The filters and attenuators are all integrated within the filter switch unit.

Test Procedure

Maximizing procedure was performed on the highest emissions to ensure that the EUT complied with all installation combinations.

The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9–90 kHz, 110–490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector.

According to ANSI C63.10-2020, 9.2: For field strength measurements made at other than the distance specified by the limit, extrapolate the measured field strength to the field strength at the distance specified by the limit using an inverse distance correction factor (20 dB/decade of distance).

$$E_{SpecLimit} = E_{Meas} + 20\log\left(\frac{D_{Meas}}{D_{SpecLimit}}\right)$$

where

$E_{SpecLimit}$	is the field strength of the emission at the distance specified by the limit, in dBuV/m
E_{Meas}	is the field strength of the emission at the measurement distance, in dBuV/m
D_{Meas}	is the measurement distance, in m
$D_{SpecLimit}$	is the distance specified by the limit, in m

Note 1: If the maximized peak measured value is under the QP/Average limit by more than 6dB, then it is unnecessary to perform an QP/Average measurement.
Note 2: For above 1GHz, the test result of peak was 20dB below to the limit of peak, which can be compliant to the average limit, so just peak value was recorded.

Calculation

The Factor is calculated by adding the Antenna Factor and Cable Loss, and subtracting the Amplifier Gain. The basic equation is as follows:

Factor = Antenna Factor + Cable Loss - Amplifier Gain

The "**Over Limit/Margin**" column of the following data tables indicates the degree of compliance with the applicable limit. For example, an over limit/margin of -7dB means the emission is 7dB below the limit. The equation for calculation is as follows:

Over Limit/Margin = Level / Corrected Amplitude – Limit
Level / Corrected Amplitude = Read Level + Factor

Test Data

For Radiated Spurious Emissions, after pre-scan in the X, Y and Z axes of orientation, the worst case as setup photos was recorded.

9kHz-1GHz

Environmental Conditions

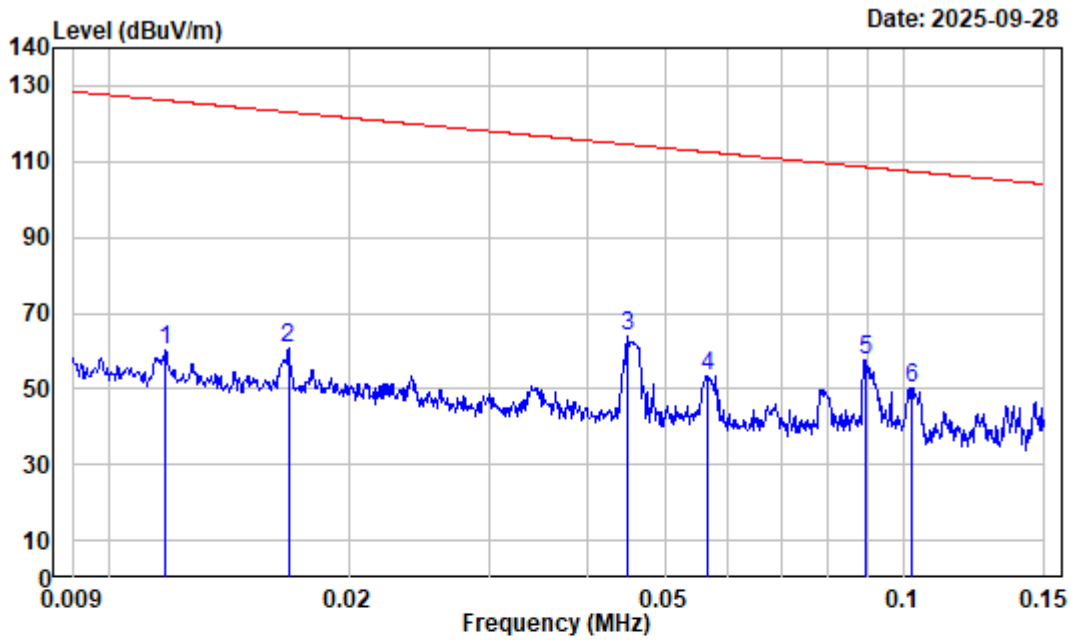
Temperature:	25.1 ℃
Relative Humidity:	56 %
ATM Pressure:	100.2 kPa
Test Engineer:	Colin Lin
Test Date:	2025-09-28
EUT Operation Mode:	BLE Transmitting

Test Result: Compliance, please refer to the below data.

Note 1: The Loop Antenna were tested in parallel, perpendicular, and ground-parallel. The worst orientation was parallel and the data was recorded in report.

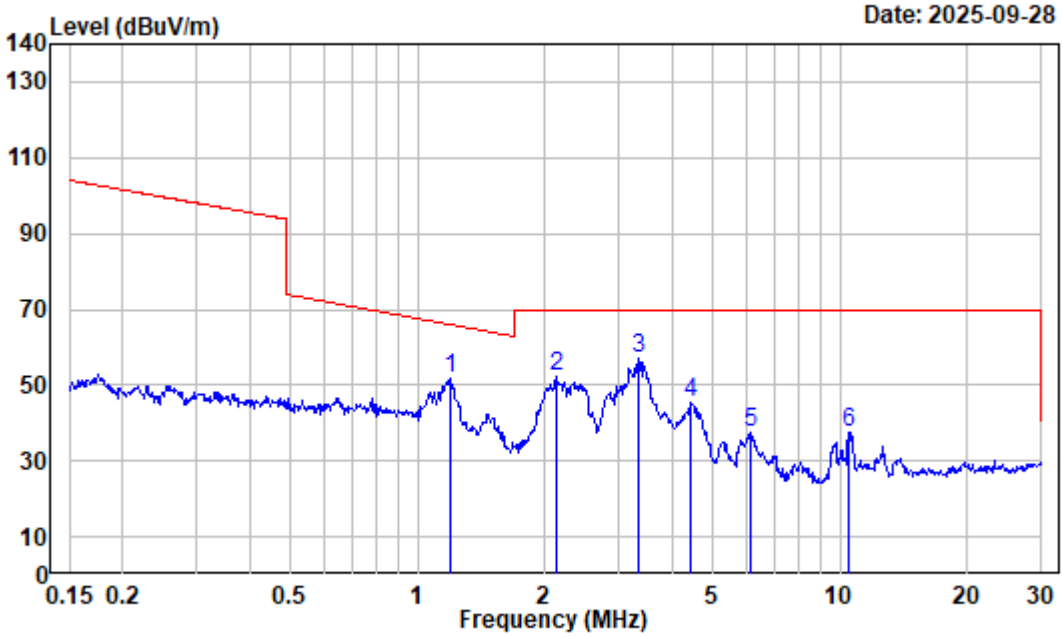
Note 2: The pre-scan maximum output power mode and channel: BLE 1M Middle Channel was tested.

9kHz~30MHz:



Site : Chamber
Condition : 3m
Job No. : 2504X28433E-RF
Polarization : Parallel Tester: Colin Lin
Test Mode : BLE Transmitting
Receiver Setting: RBW:300Hz VBW:1kHz

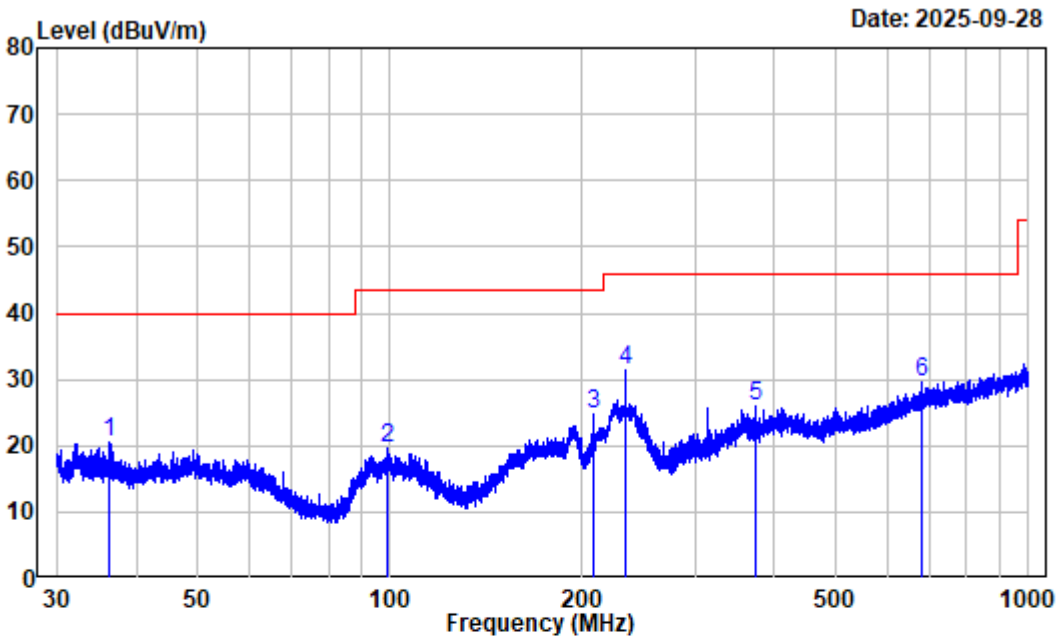
	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	0.012	35.03	24.97	60.00	126.17	-66.17	Peak
2	0.017	32.81	27.95	60.76	123.09	-62.33	Peak
3	0.045	23.87	39.97	63.84	114.57	-50.73	Peak
4	0.057	21.88	31.72	53.60	112.56	-58.96	Peak
5	0.090	17.52	40.19	57.71	108.55	-50.84	Peak
6	0.102	16.35	34.00	50.35	107.43	-57.08	Peak



Site : Chamber
Condition : 3m
Job No. : 2504X28433E-RF
Polarization : Parallel Tester: Colin Lin
Test Mode : BLE Transmitting
Receiver Setting: RBW:10kHz VBW:30kHz

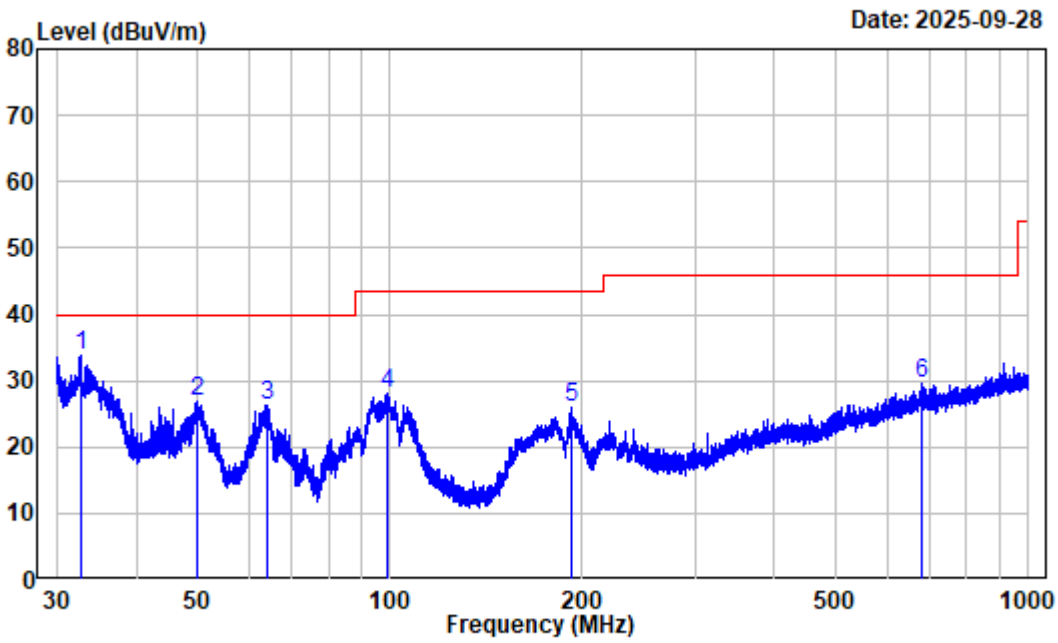
	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	1.191	-2.51	54.46	51.95	65.92	-13.97	Peak
2	2.133	-5.44	57.83	52.39	69.54	-17.15	Peak
3	3.328	-5.98	62.85	56.87	69.54	-12.67	Peak
4	4.454	-6.30	51.59	45.29	69.54	-24.25	Peak
5	6.121	-6.20	43.51	37.31	69.54	-32.23	Peak
6	10.508	-5.22	42.79	37.57	69.54	-31.97	Peak

30MHz~1GHz:



Site : Chamber
Condition : 3m HORIZONTAL
Job No. : 2504X28433E-RF Tester: Colin Lin
Test Mode : BLE Transmitting
Receiver Setting: RBW:100kHz VBW:300kHz

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	36.381	-11.38	31.87	20.49	40.00	-19.51	Peak
2	99.093	-11.47	30.99	19.52	43.50	-23.98	Peak
3	207.941	-10.67	35.41	24.74	43.50	-18.76	Peak
4	233.963	-10.41	41.69	31.28	46.00	-14.72	Peak
5	374.458	-6.79	32.65	25.86	46.00	-20.14	Peak
6	681.751	-1.18	30.62	29.44	46.00	-16.56	Peak



Site : Chamber
Condition : 3m VERTICAL
Job No. : 2504X28433E-RF Tester: Colin Lin
Test Mode : BLE Transmitting
Receiver Setting: RBW:100kHz VBW:300kHz

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	32.820	-11.97	45.84	33.87	40.00	-6.13	Peak
2	49.772	-9.93	36.86	26.93	40.00	-13.07	Peak
3	64.067	-12.12	38.48	26.36	40.00	-13.64	Peak
4	98.789	-11.54	39.63	28.09	43.50	-15.41	Peak
5	192.672	-10.04	36.11	26.07	43.50	-17.43	Peak
6	681.751	-1.18	30.81	29.63	46.00	-16.37	Peak

1GHz-25GHz

Environmental Conditions

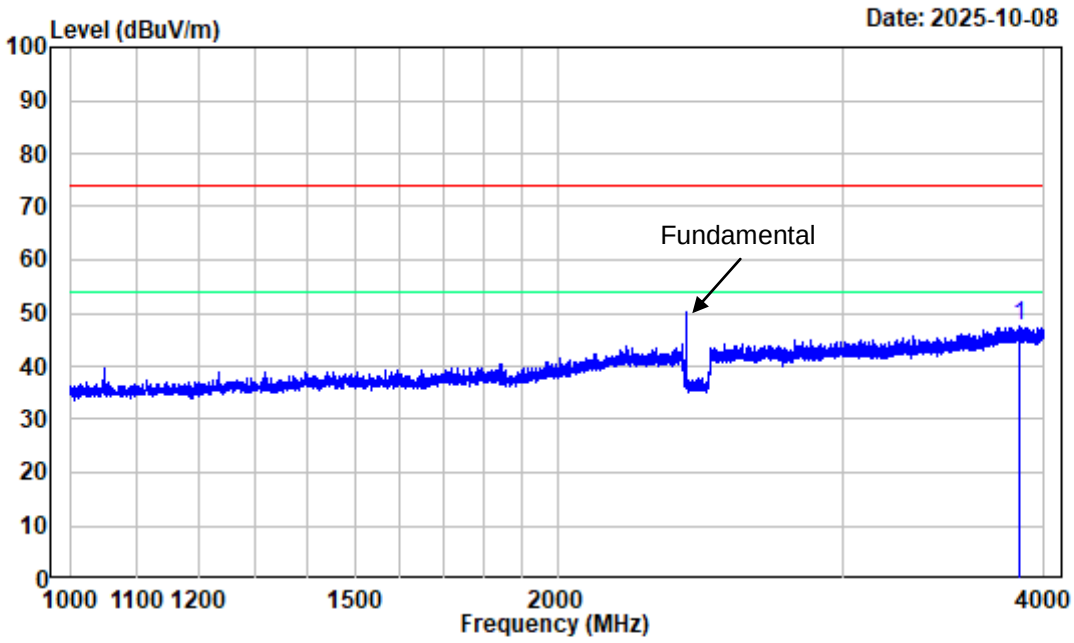
Temperature:	24.3 to 25.8 ℃
Relative Humidity:	47 to 53 %
ATM Pressure:	100.2 to 100.7 kPa
Test Engineer:	Kevin Lv
Test Date:	2025-10-08 to 2025-10-28
EUT Operation Mode:	Transmitting

Test Result: Compliance, please refer to the below data.

Note 1: For 1GHz-4GHz, the fundamental with band reject filter.

Note 2: For 18GHz-25GHz, the pre-scan maximum output power mode and channel: BLE 1M Middle Channel was tested.

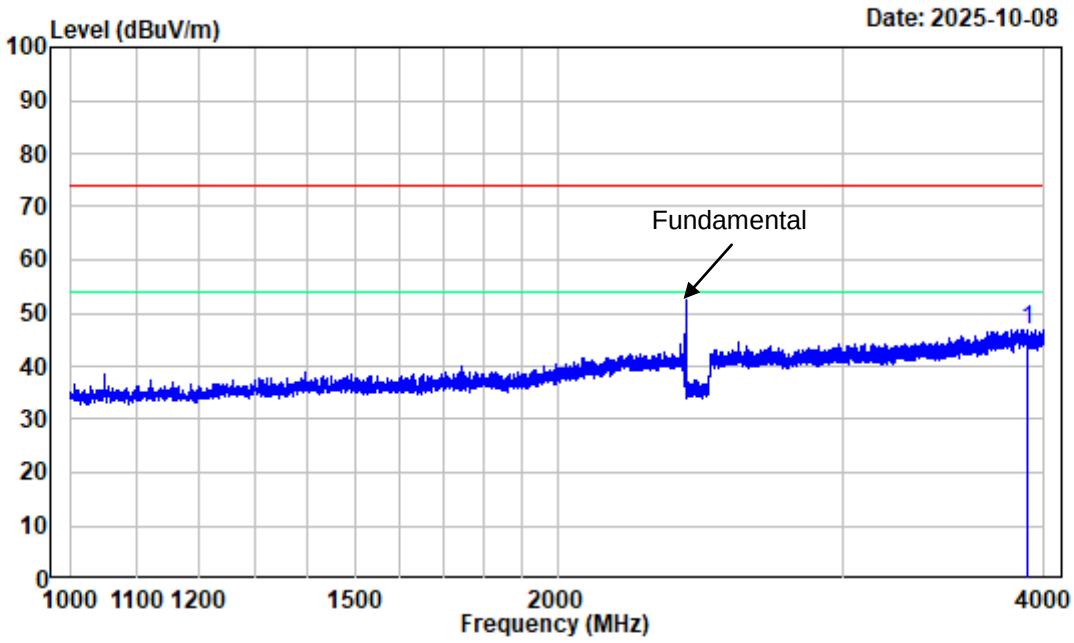
BLE 1M Low Channel 1GHz-4GHz_HORIZONTAL




```
Site        : chamber
Condition   : 3m HORIZONTAL
Project No.: 2504X28433E-RF
Test Mode   : Transmitting                Tester:Kevin Lv
Note        : BLE 1M Low Channel 2402MHz 1GHz-4GHz
SA setting  : Peak:RBW:1MHz,VBW:3MHz
```

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	3860.875	-8.15	55.89	47.74	74.00	-26.26	peak

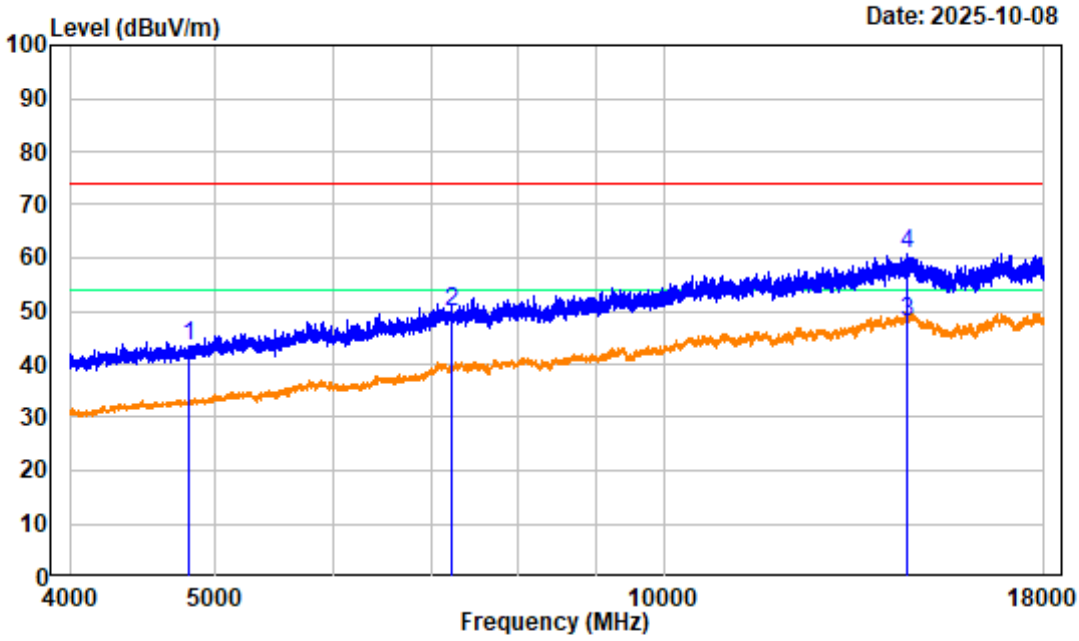
BLE 1M Low Channel 1GHz-4GHz_VERTICAL




```
Site        : chamber
Condition   : 3m VERTICAL
Project No.: 2504X28433E-RF
Test Mode   : Transmitting                Tester:Kevin Lv
Note        : BLE 1M Low Channel 2402MHz 1GHz-4GHz
SA setting  : Peak:RBW:1MHz,VBW:3MHz
```

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	3901.750	-7.92	54.90	46.98	74.00	-27.02	peak

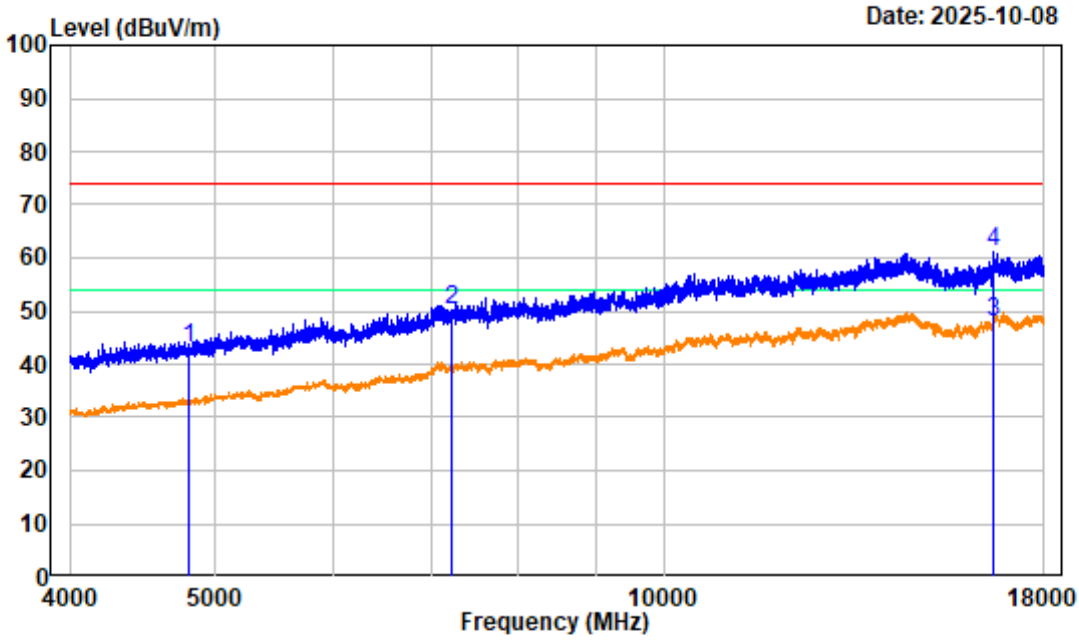
BLE 1M Low Channel 4GHz-18GHz_HORIZONTAL



Site : chamber
Condition : 3m HORIZONTAL
Project No.: 2504X28433E-RF
Test Mode : Transmitting Tester:Kevin Lv
Note : BLE 1M Low Channel 2402MHz 4GHz-18GHz
SA setting : Peak:RBW:1MHz,VBW:3MHz Ave:RBW:1MHz,VBW:5kHz

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	4804.000	-6.64	49.97	43.33	74.00	-30.67	Peak
2	7206.000	-1.36	51.05	49.69	74.00	-24.31	Peak
3	14559.500	8.91	39.07	47.98	54.00	-6.02	Average
4	14559.500	8.91	51.71	60.62	74.00	-13.38	Peak

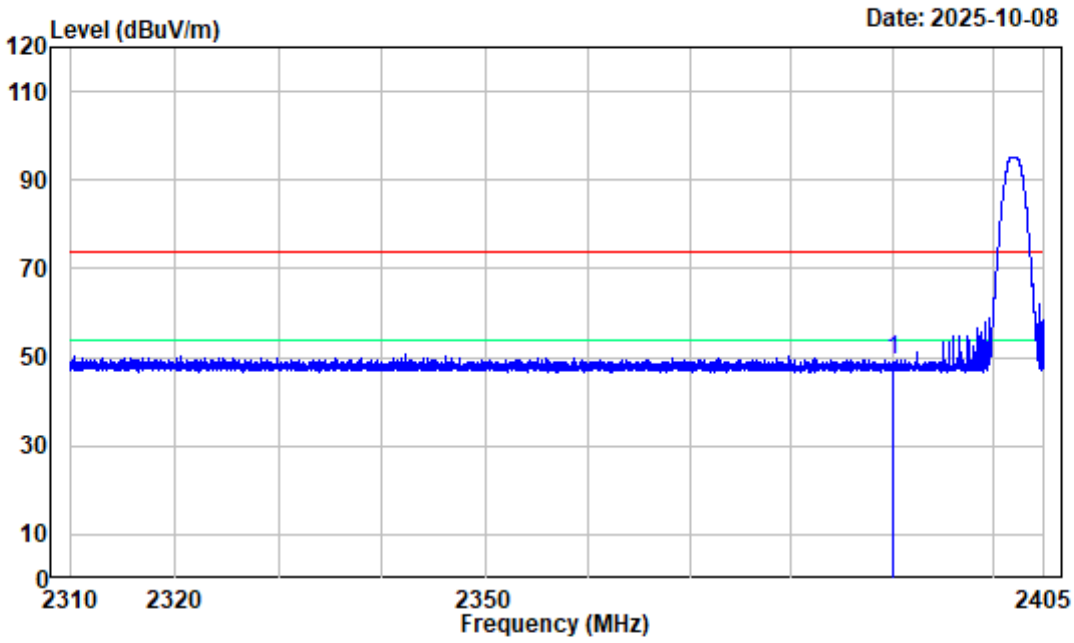
BLE 1M Low Channel 4GHz-18GHz_VERTICAL



Site : chamber
Condition : 3m VERTICAL
Project No.: 2504X28433E-RF
Test Mode : Transmitting Tester:Kevin Lv
Note : BLE 1M Low Channel 2402MHz 4GHz-18GHz
SA setting : Peak:RBW:1MHz,VBW:3MHz Ave:RBW:1MHz,VBW:5kHz

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	4804.000	-6.64	49.63	42.99	74.00	-31.01	Peak
2	7206.000	-1.36	51.73	50.37	74.00	-23.63	Peak
3	16664.750	6.76	41.08	47.84	54.00	-6.16	Average
4	16664.750	6.76	54.21	60.97	74.00	-13.03	Peak

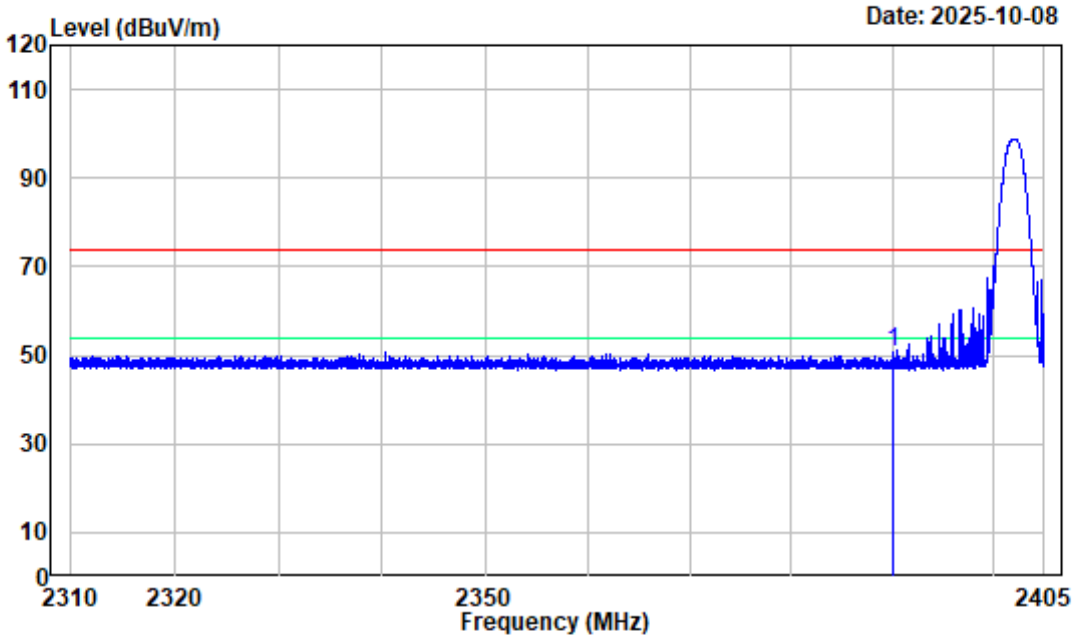
BLE 1M Low Channel Bandedge_HORIZONTAL




```
Site        : chamber
Condition   : 3m HORIZONTAL
Project No.: 2504X28433E-RF
Test Mode   : Transmitting                Tester:Kevin Lv
Note        : BLE 1M Low Channel 2402MHz Bandedge
SA setting  : Peak:RBW:1MHz,VBW:3MHz
```

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	2390.000	-10.25	59.64	49.39	74.00	-24.61	peak

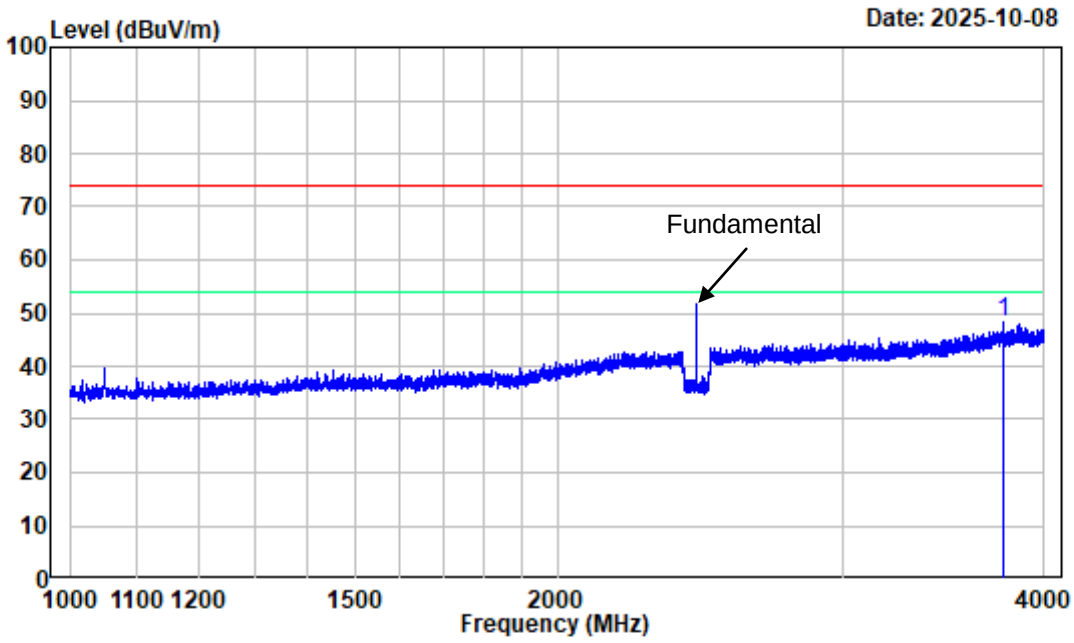
BLE 1M Low Channel Bandedge_VERTICAL



Site : chamber
Condition : 3m VERTICAL
Project No.: 2504X28433E-RF
Test Mode : Transmitting Tester:Kevin Lv
Note : BLE 1M Low Channel 2402MHz Bandedge
SA setting : Peak:RBW:1MHz,VBW:3MHz

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	2390.000	-10.25	60.90	50.65	74.00	-23.35	peak

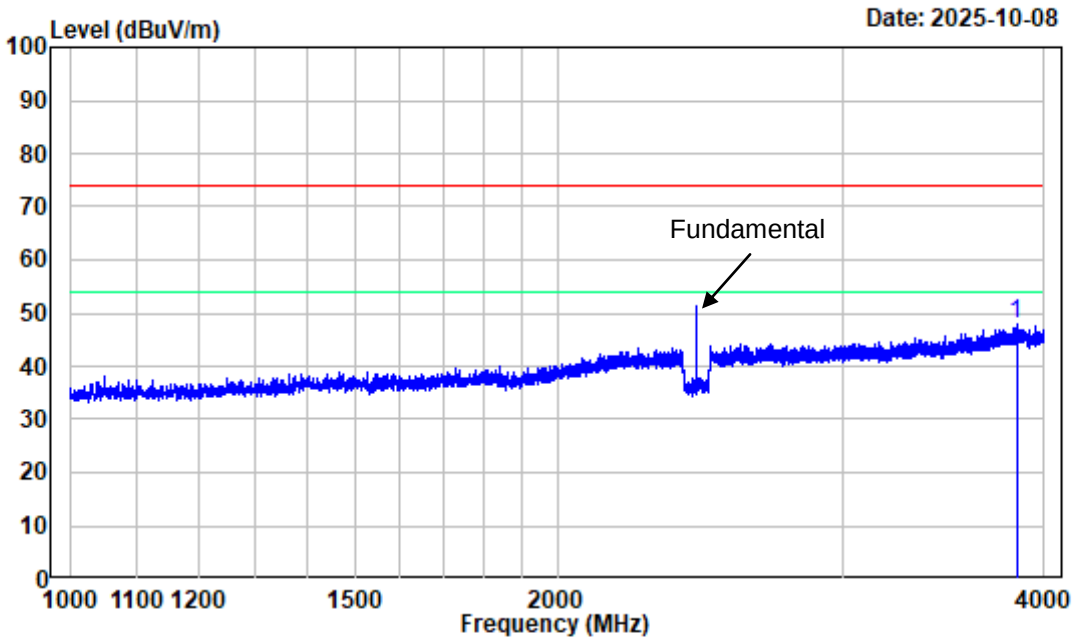
BLE 1M Middle Channel 1GHz-4GHz_HORIZONTAL




```
Site        : chamber
Condition   : 3m HORIZONTAL
Project No.: 2504X28433E-RF
Test Mode   : Transmitting                Tester:Kevin Lv
Note        : BLE 1M Middle Channel 2440MHz 1GHz-4GHz
SA setting  : Peak:RBW:1MHz,VBW:3MHz
```

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	3774.250	-8.56	56.72	48.16	74.00	-25.84	peak

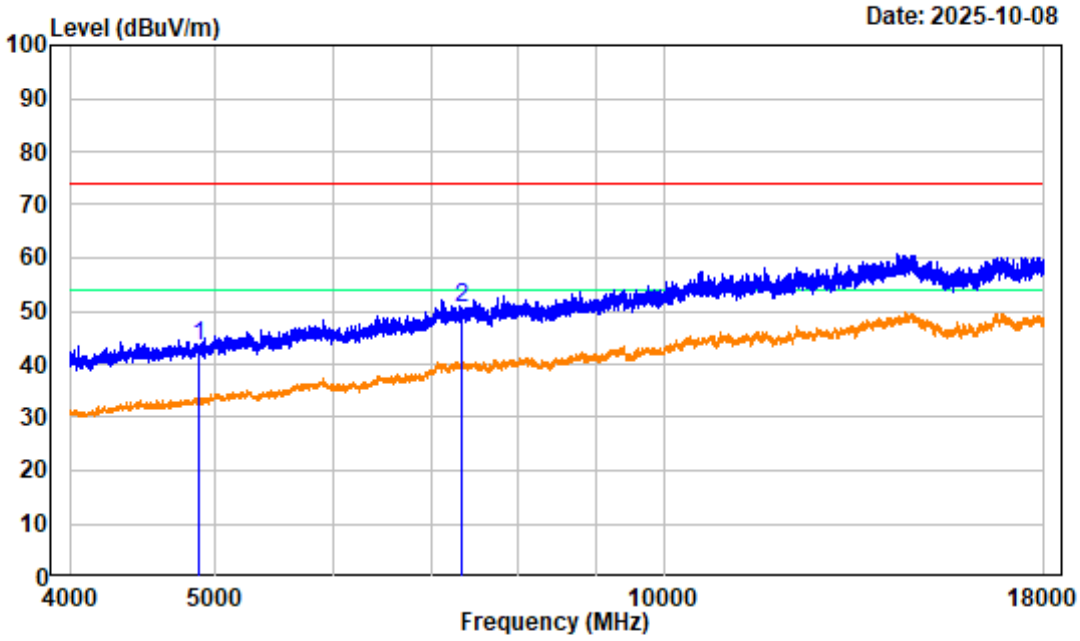
BLE 1M Middle Channel 1GHz-4GHz_VERTICAL




```
Site        : chamber
Condition   : 3m VERTICAL
Project No.: 2504X28433E-RF
Test Mode   : Transmitting                Tester:Kevin Lv
Note        : BLE 1M Middle Channel 2440MHz 1GHz-4GHz
SA setting  : Peak:RBW:1MHz,VBW:3MHz
```

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	3845.875	-8.25	56.08	47.83	74.00	-26.17	peak

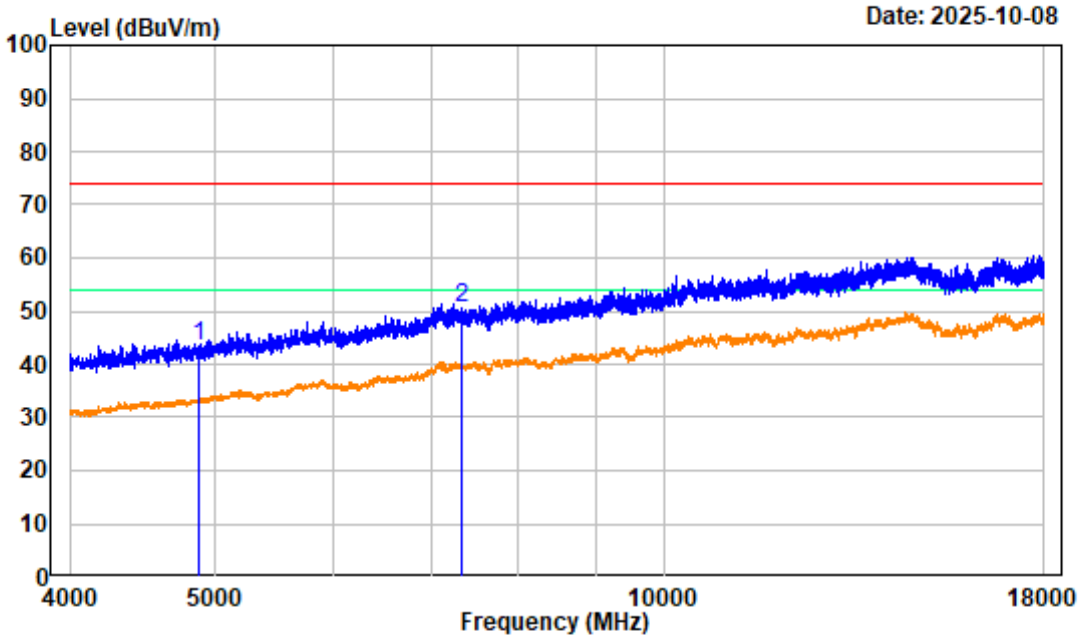
BLE 1M Middle Channel 4GHz-18GHz_HORIZONTAL



Site : chamber
Condition : 3m HORIZONTAL
Project No.: 2504X28433E-RF
Test Mode : Transmitting Tester:Kevin Lv
Note : BLE 1M Middle Channel 2440MHz 4GHz-18GHz
SA setting : Peak:RBW:1MHz,VBW:3MHz Ave:RBW:1MHz,VBW:5kHz

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	4880.000	-6.57	49.91	43.34	74.00	-30.66	Peak
2	7320.000	-1.16	51.56	50.40	74.00	-23.60	Peak

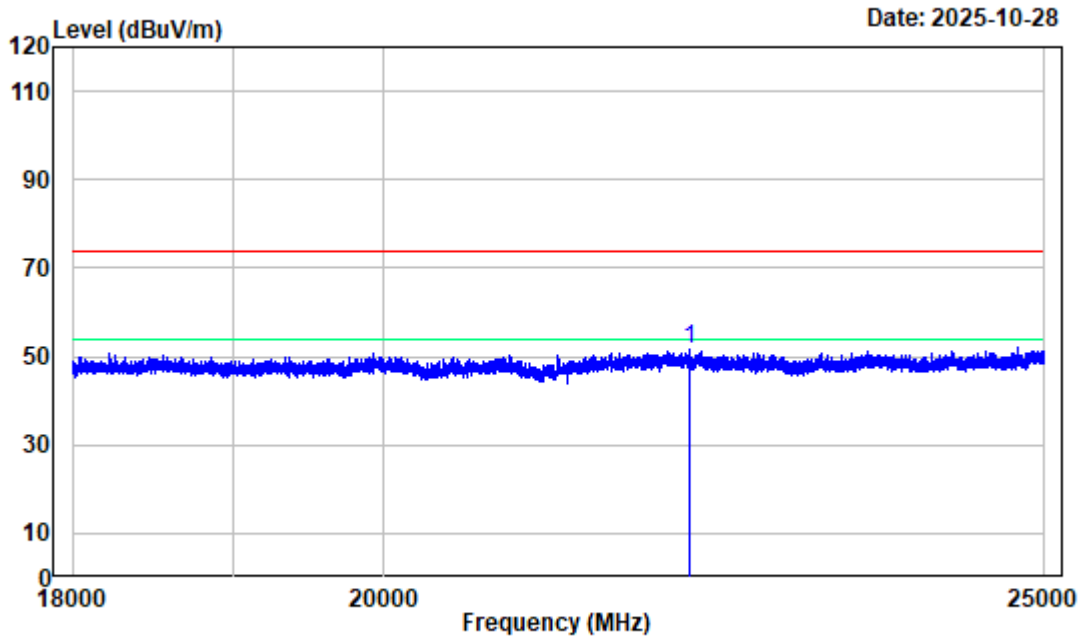
BLE 1M Middle Channel 4GHz-18GHz_VERTICAL



Site : chamber
Condition : 3m VERTICAL
Project No.: 2504X28433E-RF
Test Mode : Transmitting Tester:Kevin Lv
Note : BLE 1M Middle Channel 2440MHz 4GHz-18GHz
SA setting : Peak:RBW:1MHz,VBW:3MHz Ave:RBW:1MHz,VBW:5kHz

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	4880.000	-6.57	49.82	43.25	74.00	-30.75	Peak
2	7320.000	-1.16	51.82	50.66	74.00	-23.34	Peak

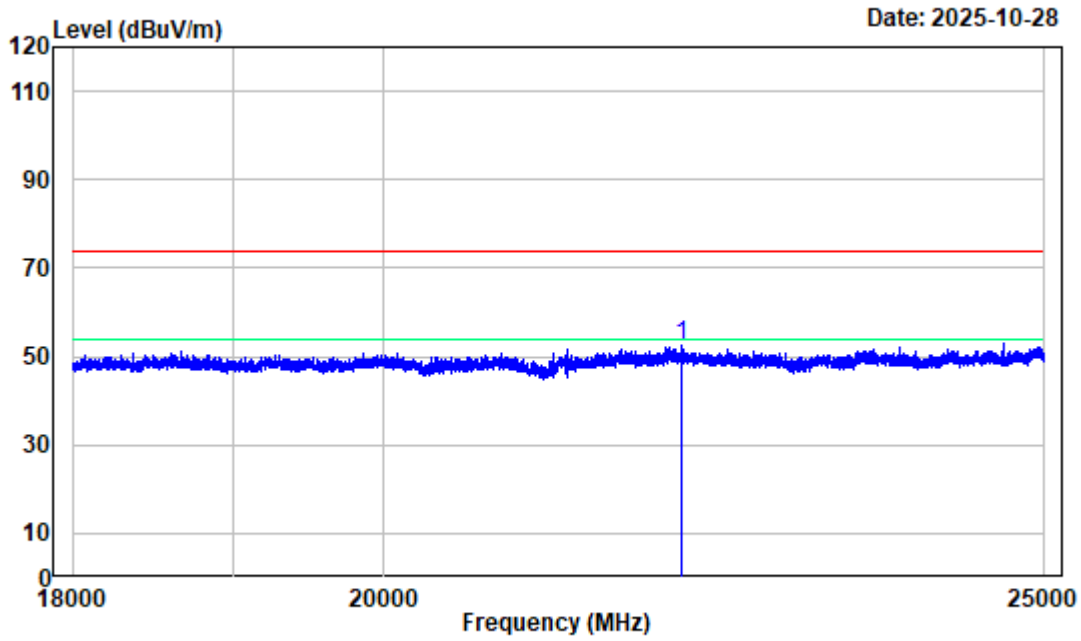
BLE 1M Middle Channel 18GHz-25GHz_HORIZONTAL



Site : chamber
Condition : 3m Horizontal
Project No.: 2504X28433E-RF
Test Mode : Transmitting Tester:Kevin Lv
Note : BLE 1M Middle Channel 2440MHz 18GHz-25GHz
SA setting : Peak:RBW:1MHz,VBW:3MHz

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	22168.500	0.77	50.76	51.53	74.00	-22.47	Peak

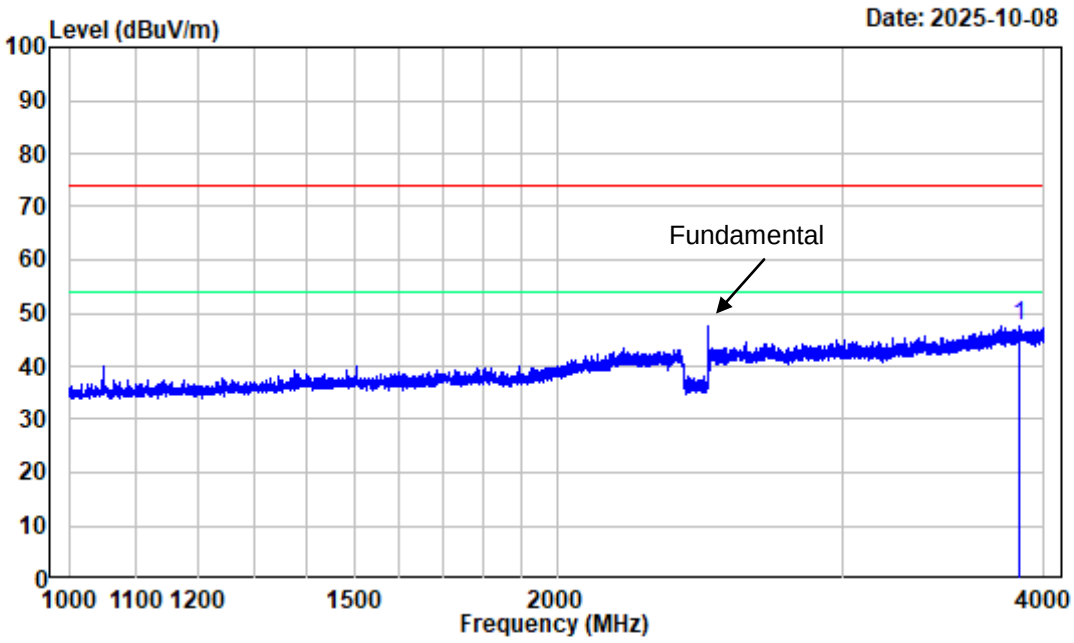
BLE 1M Middle Channel 18GHz-25GHz_ VERTICAL




```
Site        : chamber
Condition   : 3m VERTICAL
Project No.: 2504X28433E-RF
Test Mode   : Transmitting                Tester:Kevin Lv
Note        : BLE 1M Middle Channel 2440MHz 18GHz-25GHz
SA setting  : Peak:RBW:1MHz,VBW:3MHz
```

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	22112.500	0.75	51.72	52.47	74.00	-21.53	Peak

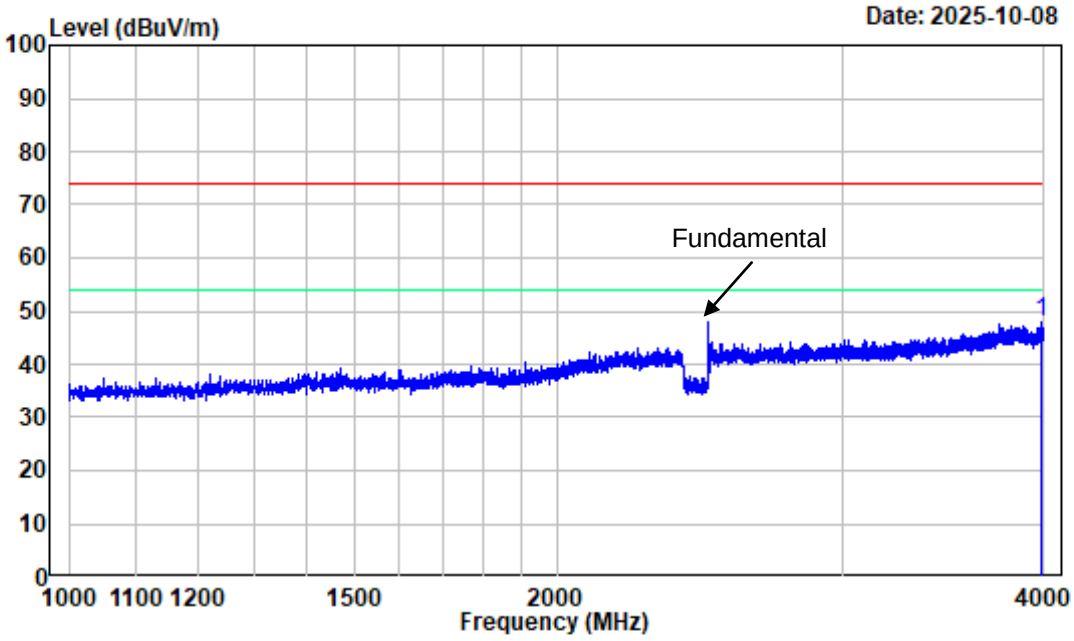
BLE 1M High Channel 1GHz-4GHz_HORIZONTAL



Site : chamber
Condition : 3m HORIZONTAL
Project No.: 2504X28433E-RF
Test Mode : Transmitting Tester:Kevin Lv
Note : BLE 1M High Channel 2480MHz 1GHz-4GHz
SA setting : Peak:RBW:1MHz,VBW:3MHz

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	3865.375	-8.13	55.79	47.66	74.00	-26.34	peak

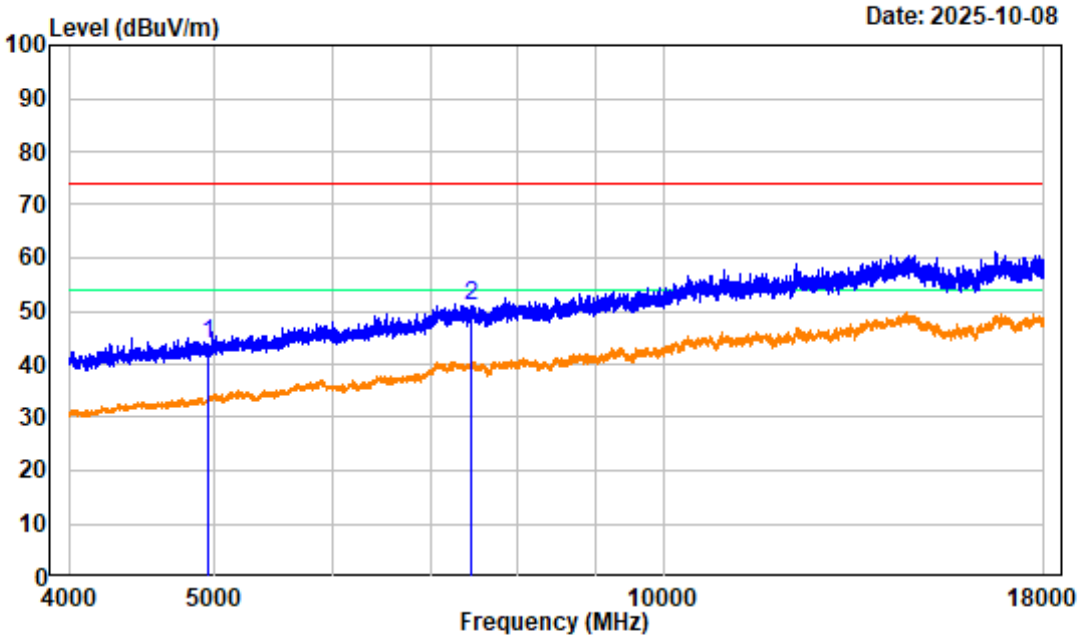
BLE 1M High Channel 1GHz-4GHz_VERTICAL



Site : chamber
Condition : 3m VERTICAL
Project No.: 2504X28433E-RF
Test Mode : Transmitting Tester:Kevin Lv
Note : BLE 1M High Channel 2480MHz 1GHz-4GHz
SA setting : Peak:RBW:1MHz,VBW:3MHz

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	3980.500	-8.23	55.97	47.74	74.00	-26.26	peak

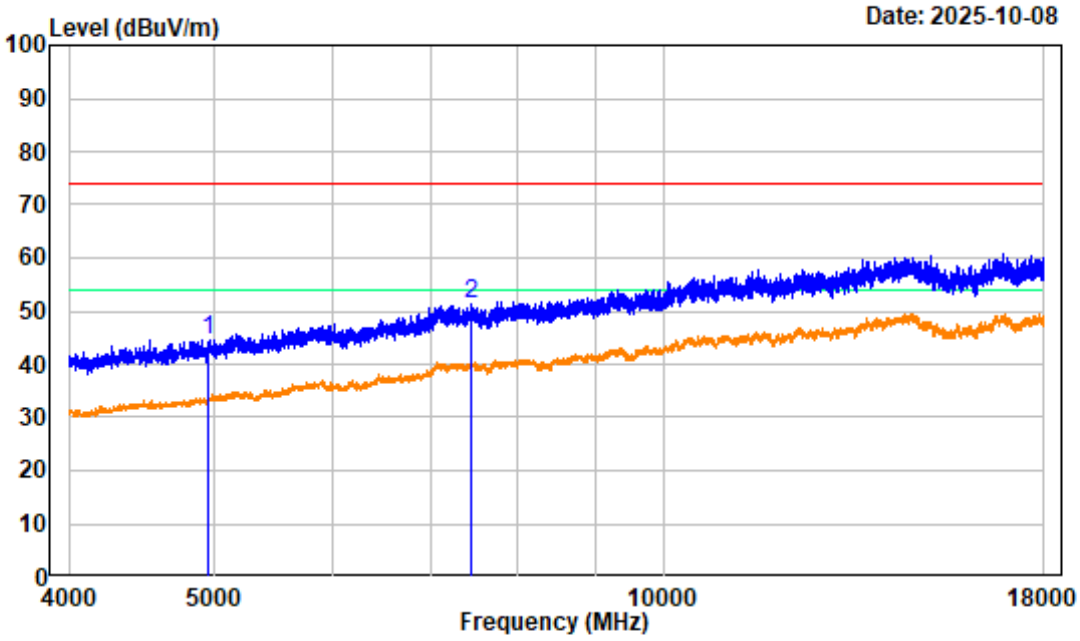
BLE 1M High Channel 4GHz-18GHz_HORIZONTAL



Site : chamber
Condition : 3m HORIZONTAL
Project No.: 2504X28433E-RF
Test Mode : Transmitting Tester:Kevin Lv
Note : BLE 1M High Channel 2480MHz 4GHz-18GHz
SA setting : Peak:RBW:1MHz,VBW:3MHz Ave:RBW:1MHz,VBW:5kHz

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	4960.000	-6.32	49.95	43.63	74.00	-30.37	Peak
2	7440.000	-0.97	52.01	51.04	74.00	-22.96	Peak

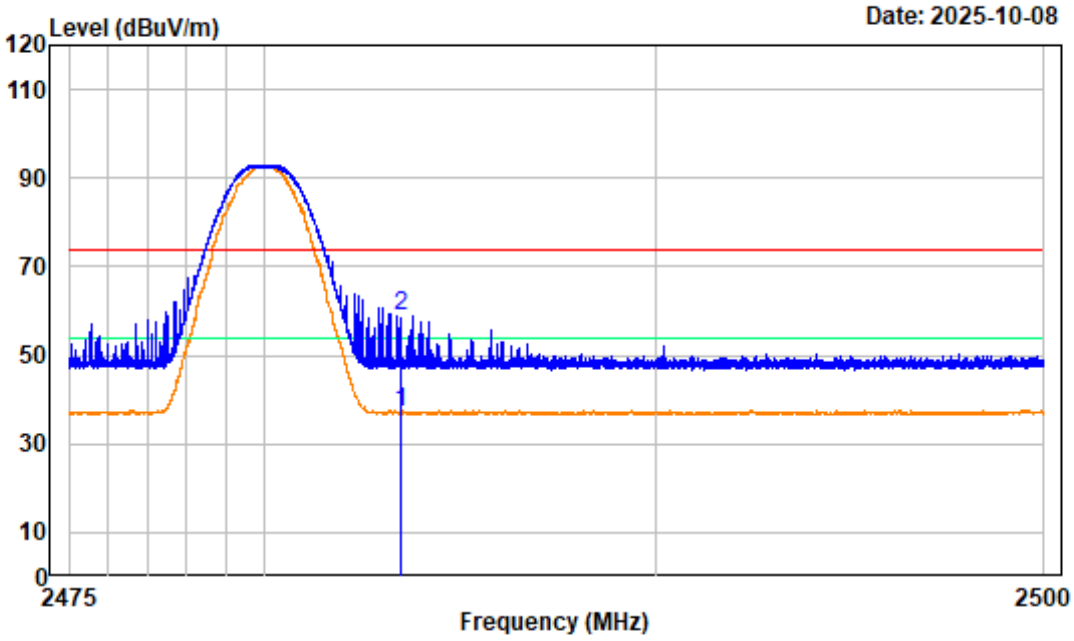
BLE 1M High Channel 4GHz-18GHz_VERTICAL



Site : chamber
Condition : 3m VERTICAL
Project No.: 2504X28433E-RF
Test Mode : Transmitting Tester:Kevin Lv
Note : BLE 1M High Channel 2480MHz 4GHz-18GHz
SA setting : Peak:RBW:1MHz,VBW:3MHz Ave:RBW:1MHz,VBW:5kHz

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	4960.000	-6.32	51.03	44.71	74.00	-29.29	Peak
2	7440.000	-0.97	52.44	51.47	74.00	-22.53	Peak

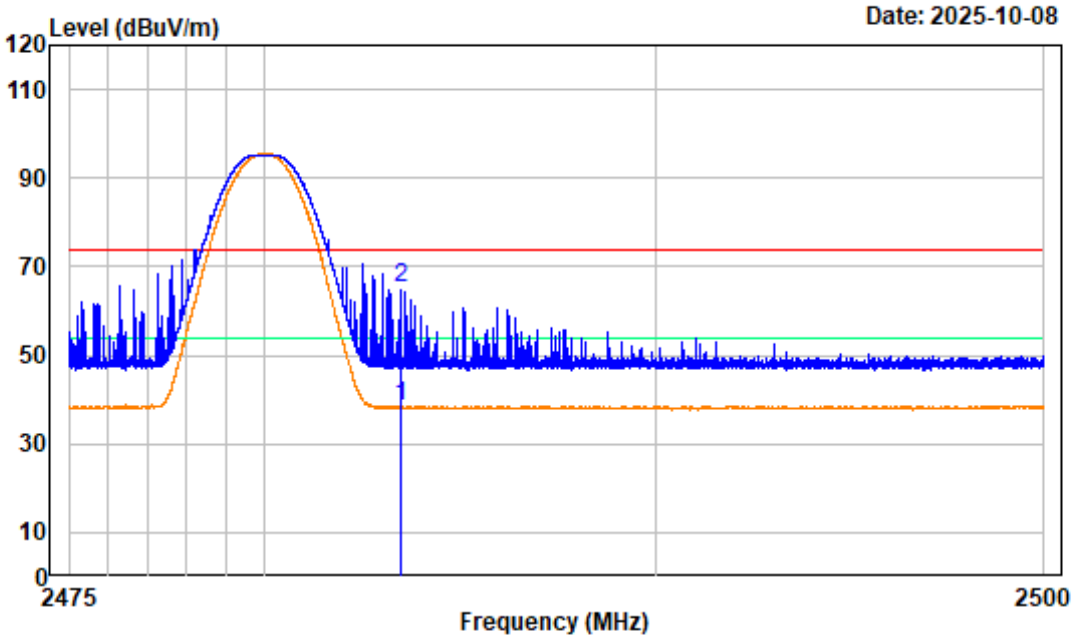
BLE 1M High Channel Bandedge_HORIZONTAL



Site : chamber
Condition : 3m HORIZONTAL
Project No.: 2504X28433E-RF
Test Mode : Transmitting Tester:Kevin Lv
Note : BLE 1M High Channel 2480MHz Bandedge
SA setting : Peak:RBW:1MHz,VBW:3MHz Ave:RBW:1MHz,VBW:5kHz

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	2483.500	-10.23	47.14	36.91	54.00	-17.09	average
2	2483.500	-10.23	69.17	58.94	74.00	-15.06	peak

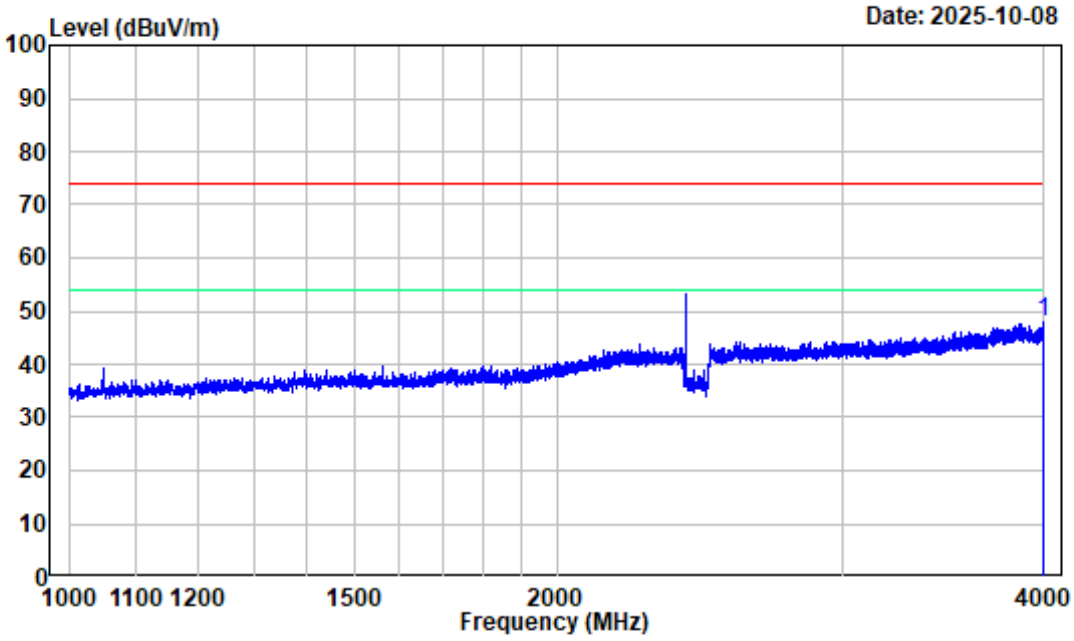
BLE 1M High Channel Bandedge_VERTICAL



Site : chamber
Condition : 3m VERTICAL
Project No.: 2504X28433E-RF
Test Mode : Transmitting Tester:Kevin Lv
Note : BLE 1M High Channel 2480MHz Bandedge
SA setting : Peak:RBW:1MHz,VBW:3MHz Ave:RBW:1MHz,VBW:5kHz

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	2483.500	-10.23	48.63	38.40	54.00	-15.60	average
2	2483.500	-10.23	75.64	65.41	74.00	-8.59	peak

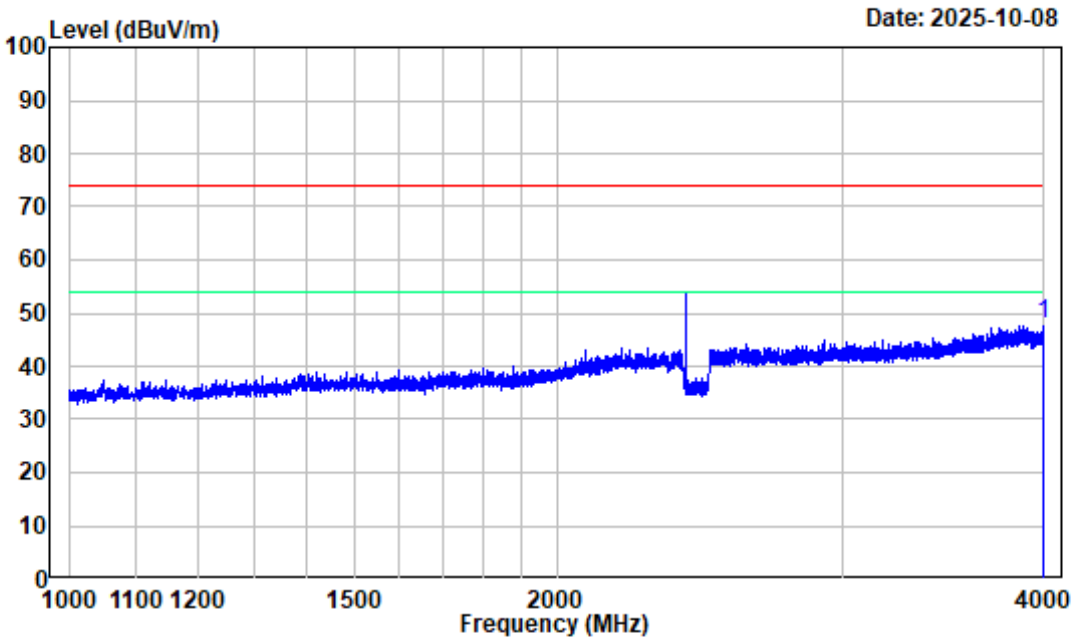
BLE 2M Low Channel 1GHz-4GHz_HORIZONTAL



Site : chamber
Condition : 3m HORIZONTAL
Project No.: 2504X28433E-RF
Test Mode : Transmitting Tester:Kevin Lv
Note : BLE 2M Low Channel 2404MHz 1GHz-4GHz
SA setting : Peak:RBW:1MHz,VBW:3MHz

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	3992.500	-8.15	56.01	47.86	74.00	-26.14	peak

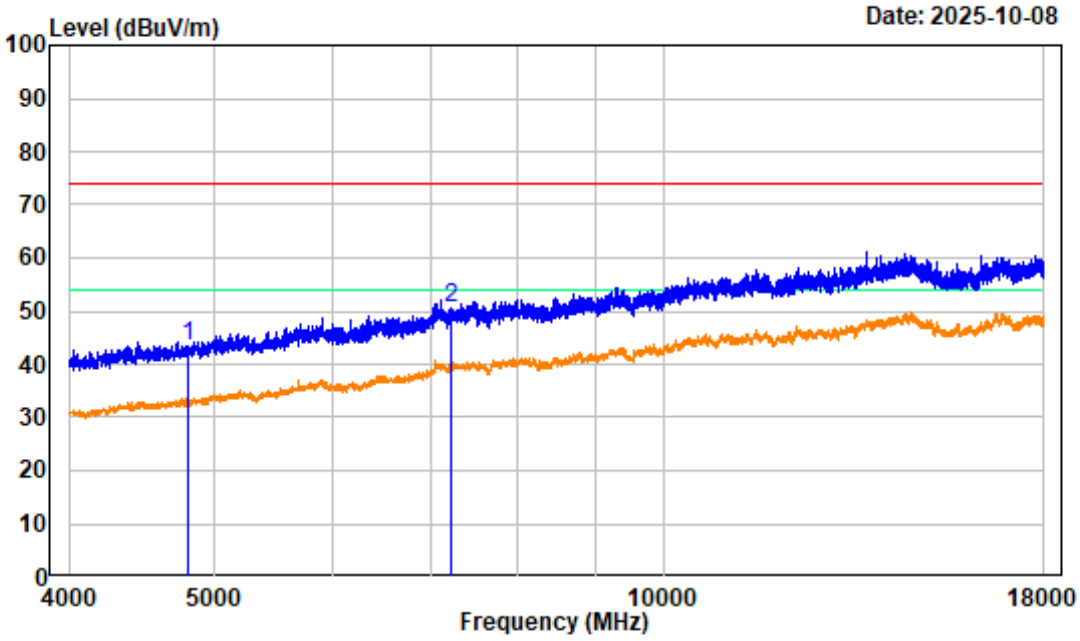
BLE 2M Low Channel 1GHz-4GHz_VERTICAL



Site : chamber
Condition : 3m VERTICAL
Project No.: 2504X28433E-RF
Test Mode : Transmitting Tester:Kevin Lv
Note : BLE 2M Low Channel 2404MHz 1GHz-4GHz
SA setting : Peak:RBW:1MHz,VBW:3MHz

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	4000.000	-8.09	55.85	47.76	74.00	-26.24	peak

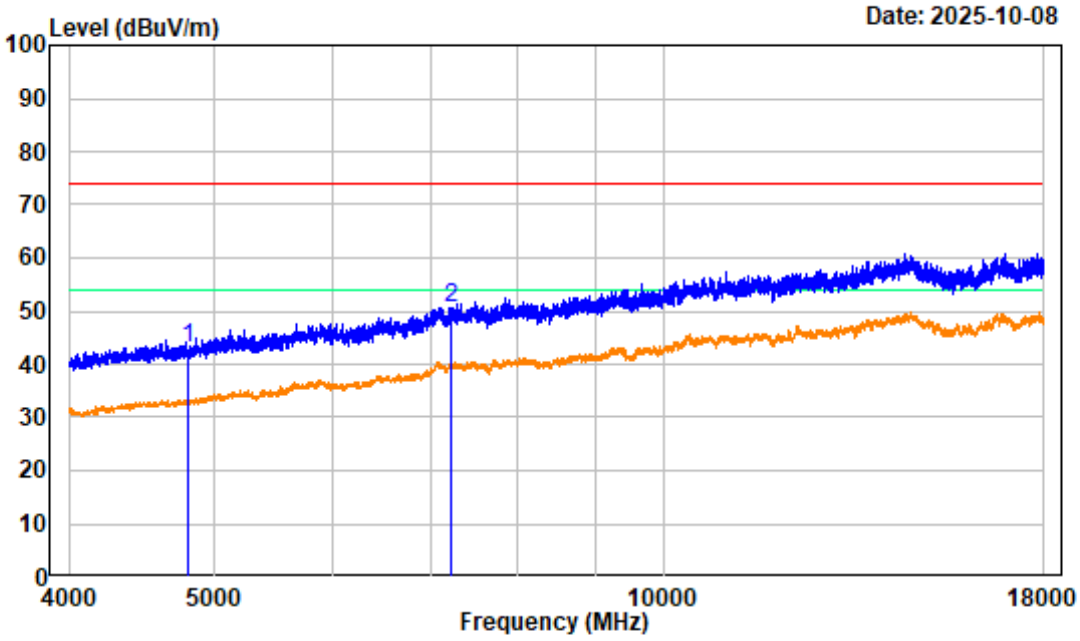
BLE 2M Low Channel 4GHz-18GHz_HORIZONTAL



Site : chamber
Condition : 3m HORIZONTAL
Project No.: 2504X28433E-RF
Test Mode : Transmitting Tester:Kevin Lv
Note : BLE 2M Low Channel 2404MHz 4GHz-18GHz
SA setting : Peak:RBW:1MHz,VBW:3MHz Ave:RBW:1MHz,VBW:5kHz

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	4808.000	-6.64	49.95	43.31	74.00	-30.69	Peak
2	7212.000	-1.36	51.90	50.54	74.00	-23.46	Peak

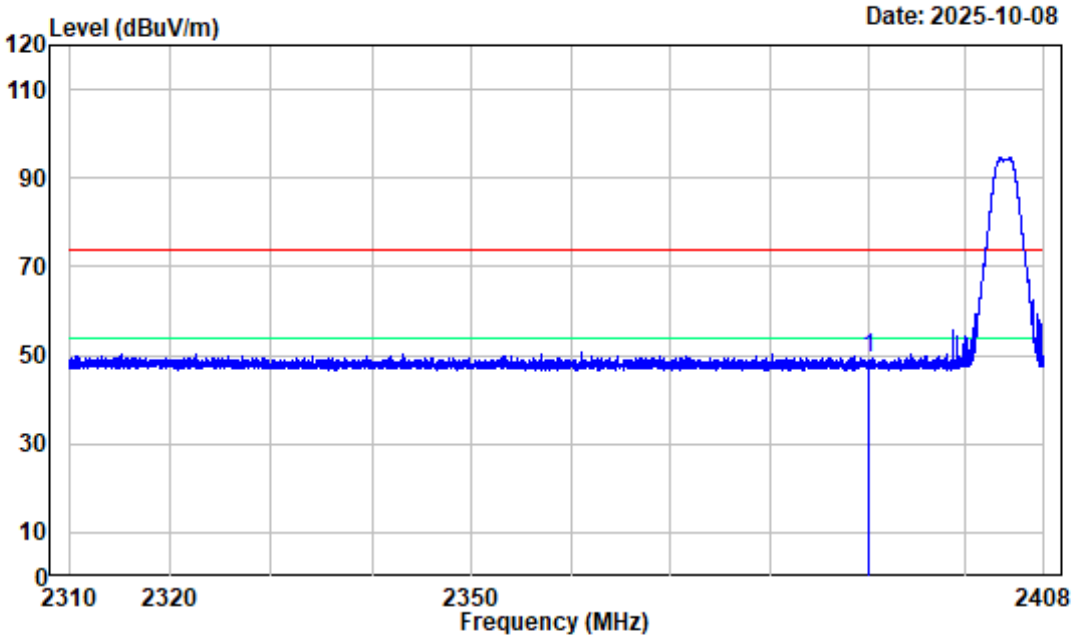
BLE 2M Low Channel 4GHz-18GHz_VERTICAL



Site : chamber
Condition : 3m VERTICAL
Project No.: 2504X28433E-RF
Test Mode : Transmitting Tester:Kevin Lv
Note : BLE 2M Low Channel 2404MHz 4GHz-18GHz
SA setting : Peak:RBW:1MHz,VBW:3MHz Ave:RBW:1MHz,VBW:5kHz

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	4808.000	-6.64	49.49	42.85	74.00	-31.15	Peak
2	7212.000	-1.36	51.79	50.43	74.00	-23.57	Peak

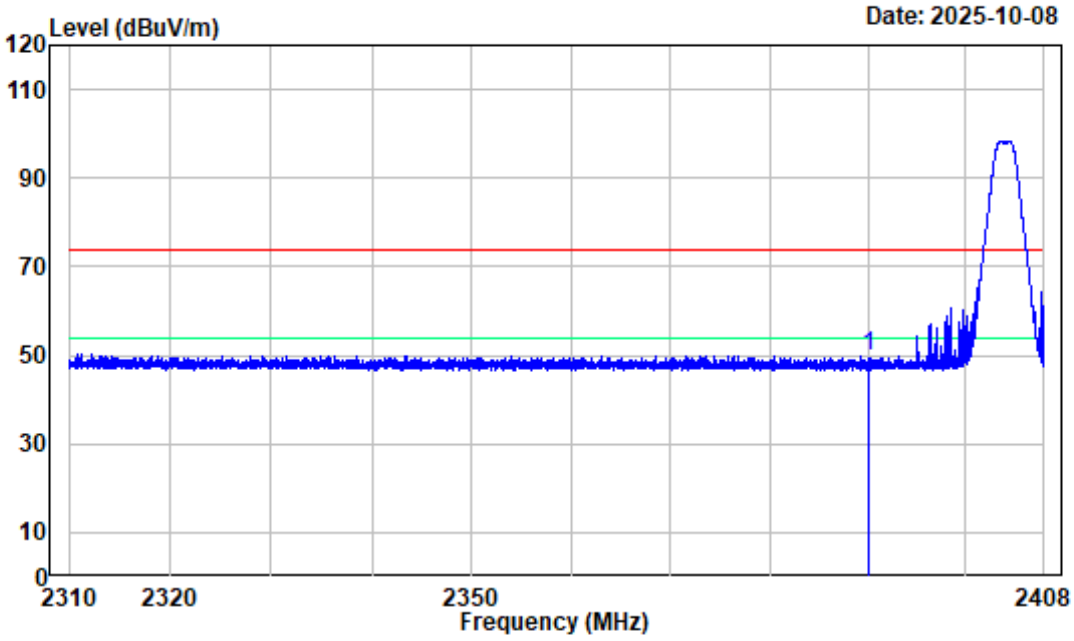
BLE 2M Low Channel Bandedge_HORIZONTAL



Site : chamber
Condition : 3m HORIZONTAL
Project No.: 2504X28433E-RF
Test Mode : Transmitting Tester:Kevin Lv
Note : BLE 2M Low Channel 2404MHz Bandedge
SA setting : Peak:RBW:1MHz,VBW:3MHz

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	2390.000	-10.25	59.40	49.15	74.00	-24.85	peak

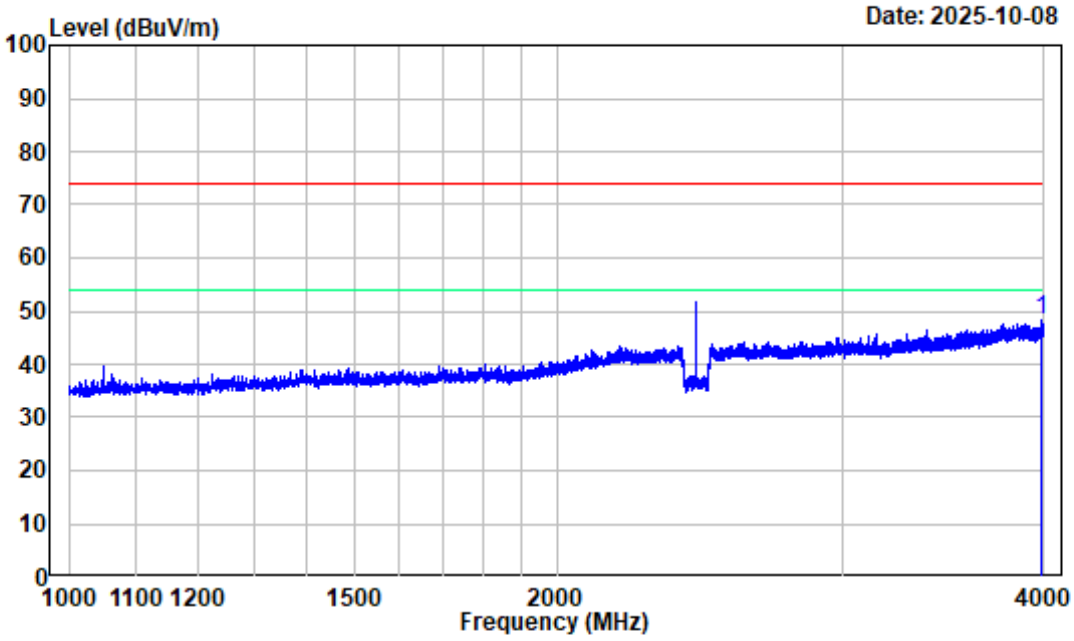
BLE 2M Low Channel Bandedge_VERTICAL



Site : chamber
Condition : 3m VERTICAL
Project No.: 2504X28433E-RF
Test Mode : Transmitting Tester:Kevin Lv
Note : BLE 2M Low Channel 2404MHz Bandedge
SA setting : Peak:RBW:1MHz,VBW:3MHz

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	2390.000	-10.25	60.07	49.82	74.00	-24.18	peak

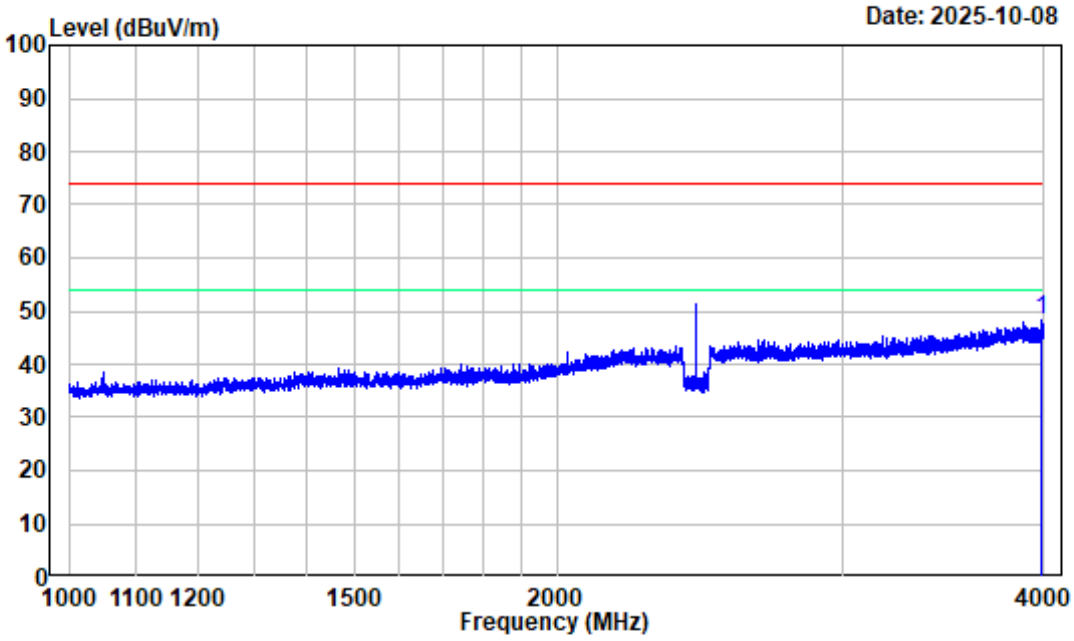
BLE 2M Middle Channel 1GHz-4GHz_HORIZONTAL



Site : chamber
Condition : 3m HORIZONTAL
Project No.: 2504X28433E-RF
Test Mode : Transmitting Tester:Kevin Lv
Note : BLE 2M Middle Channel 2440MHz 1GHz-4GHz
SA setting : Peak:RBW:1MHz,VBW:3MHz

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	3985.750	-8.20	56.38	48.18	74.00	-25.82	peak

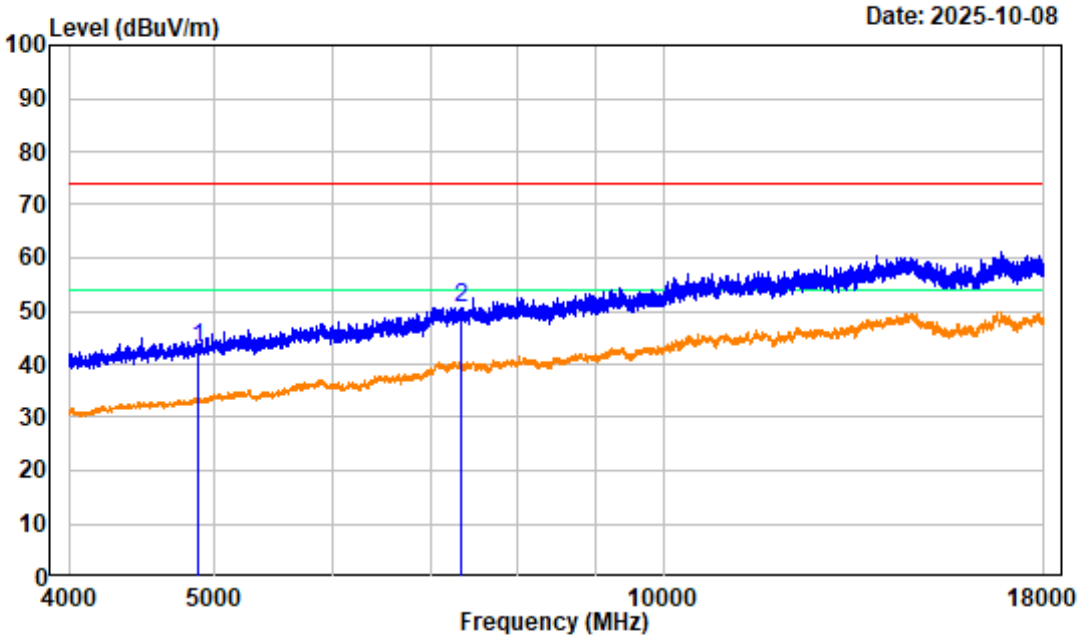
BLE 2M Middle Channel 1GHz-4GHz_VERTICAL



Site : chamber
Condition : 3m VERTICAL
Project No.: 2504X28433E-RF
Test Mode : Transmitting Tester:Kevin Lv
Note : BLE 2M Middle Channel 2440MHz 1GHz-4GHz
SA setting : Peak:RBW:1MHz,VBW:3MHz

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	3983.875	-8.21	56.56	48.35	74.00	-25.65	peak

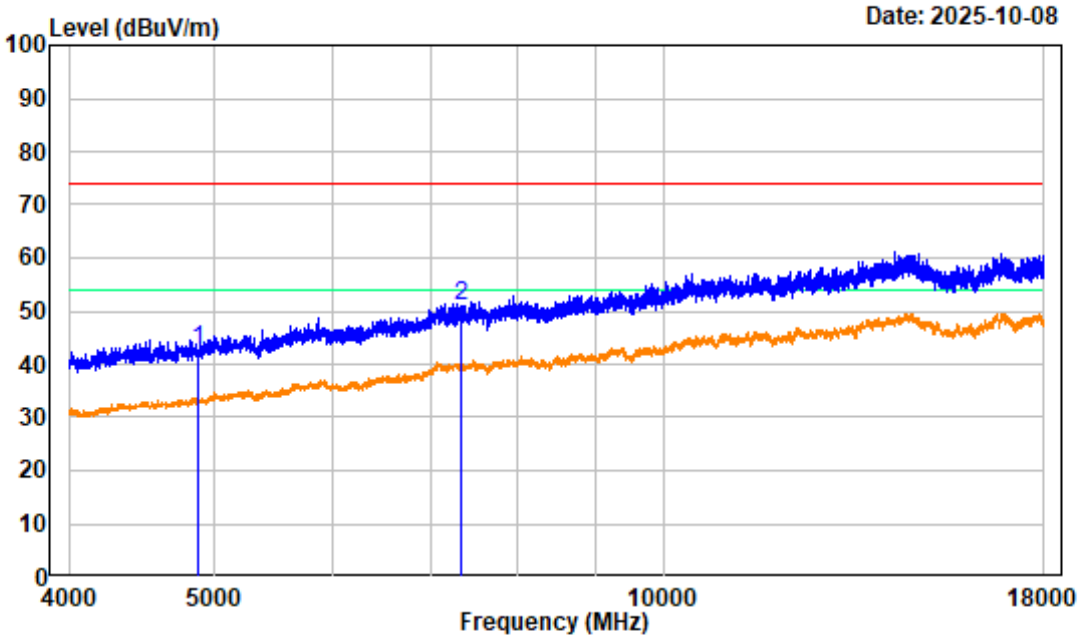
BLE 2M Middle Channel 4GHz-18GHz_HORIZONTAL



Site : chamber
Condition : 3m HORIZONTAL
Project No.: 2504X28433E-RF
Test Mode : Transmitting Tester:Kevin Lv
Note : BLE 2M Middle Channel 2440MHz 4GHz-18GHz
SA setting : Peak:RBW:1MHz,VBW:3MHz Ave:RBW:1MHz,VBW:5kHz

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	4880.000	-6.57	49.66	43.09	74.00	-30.91	Peak
2	7320.000	-1.16	51.81	50.65	74.00	-23.35	Peak

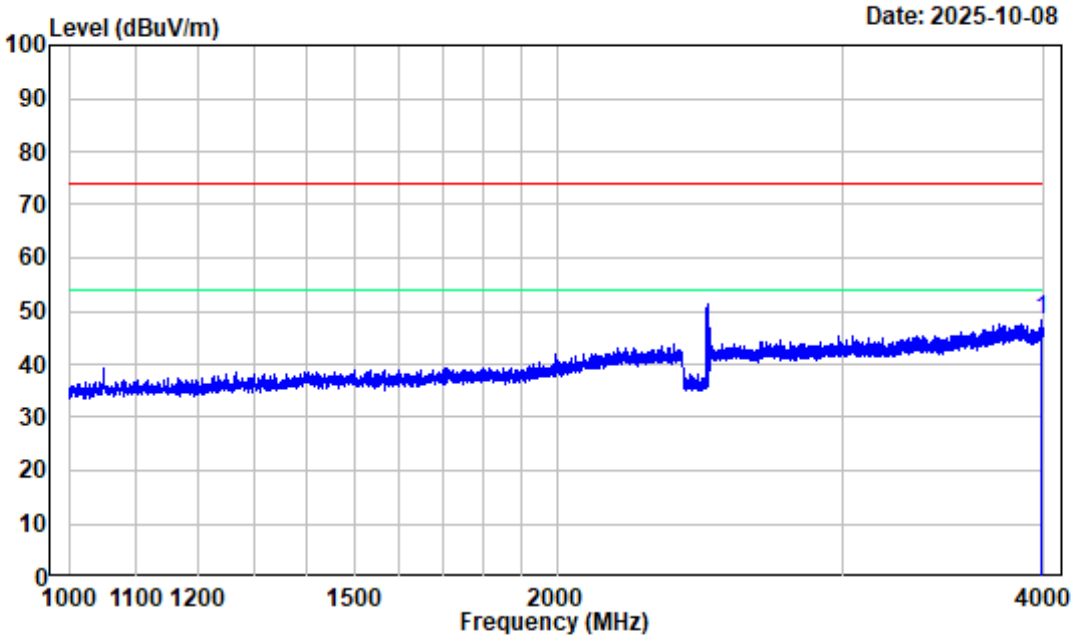
BLE 2M Middle Channel 4GHz-18GHz_VERTICAL



Site : chamber
Condition : 3m VERTICAL
Project No.: 2504X28433E-RF
Test Mode : Transmitting Tester:Kevin Lv
Note : BLE 2M Middle Channel 2440MHz 4GHz-18GHz
SA setting : Peak:RBW:1MHz,VBW:3MHz Ave:RBW:1MHz,VBW:5kHz

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	4880.000	-6.57	49.03	42.46	74.00	-31.54	Peak
2	7320.000	-1.16	51.92	50.76	74.00	-23.24	Peak

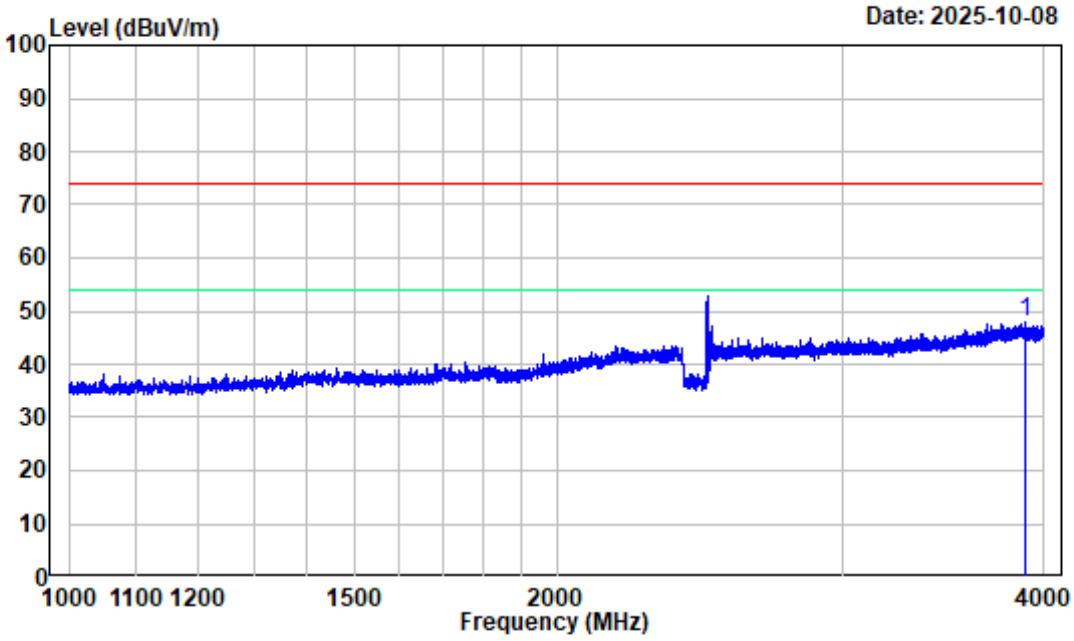
BLE 2M High Channel 1GHz-4GHz_HORIZONTAL



Site : chamber
Condition : 3m HORIZONTAL
Project No.: 2504X28433E-RF
Test Mode : Transmitting Tester:Kevin Lv
Note : BLE 2M High Channel 2478MHz 1GHz-4GHz
SA setting : Peak:RBW:1MHz,VBW:3MHz

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	3988.000	-8.17	56.35	48.18	74.00	-25.82	peak

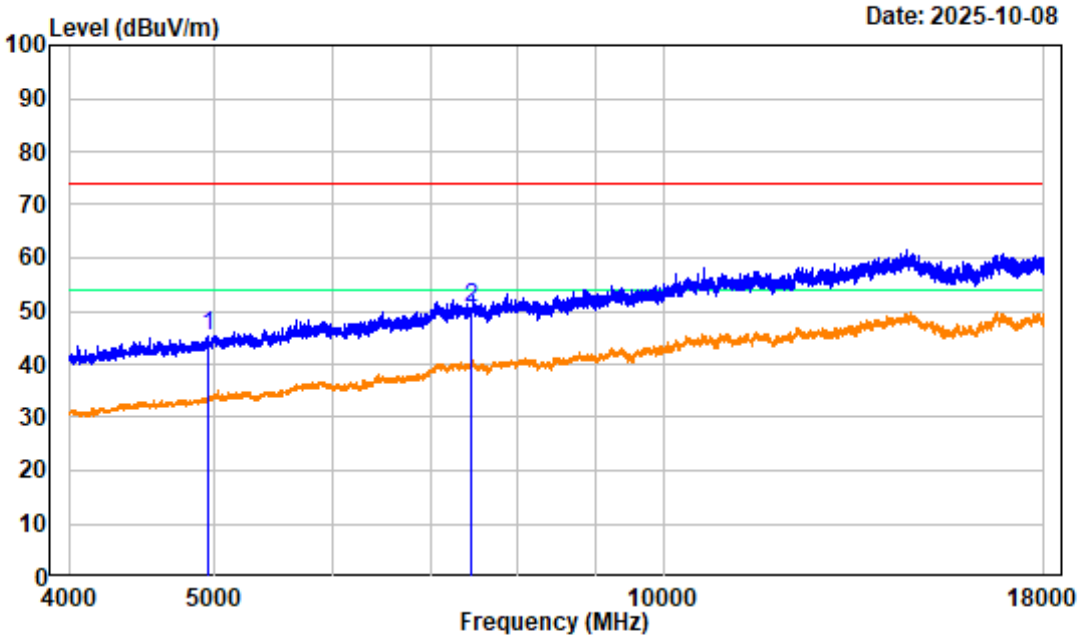
BLE 2M High Channel 1GHz-4GHz_VERTICAL



Site : chamber
Condition : 3m VERTICAL
Project No.: 2504X28433E-RF
Test Mode : Transmitting Tester:Kevin Lv
Note : BLE 2M High Channel 2478MHz 1GHz-4GHz
SA setting : Peak:RBW:1MHz,VBW:3MHz

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	3898.750	-7.90	55.72	47.82	74.00	-26.18	peak

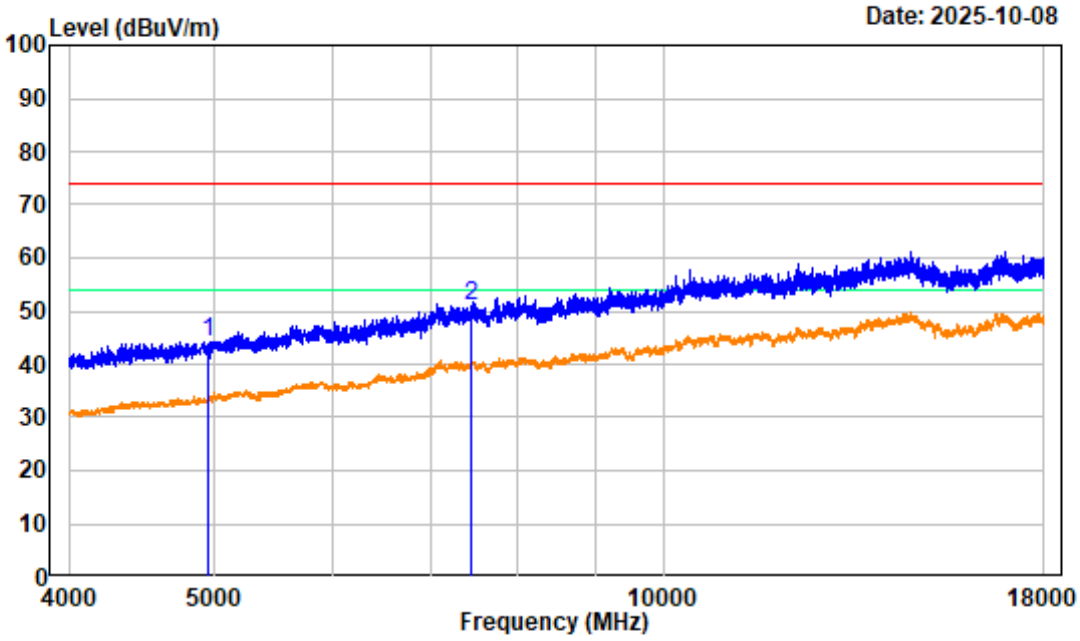
BLE 2M High Channel 4GHz-18GHz_HORIZONTAL



Site : chamber
Condition : 3m HORIZONTAL
Project No.: 2504X28433E-RF
Test Mode : Transmitting Tester:Kevin Lv
Note : BLE 2M High Channel 2478MHz 4GHz-18GHz
SA setting : Peak:RBW:1MHz,VBW:3MHz Ave:RBW:1MHz,VBW:5kHz

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	4956.000	-6.35	51.58	45.23	74.00	-28.77	Peak
2	7434.000	-1.03	51.72	50.69	74.00	-23.31	Peak

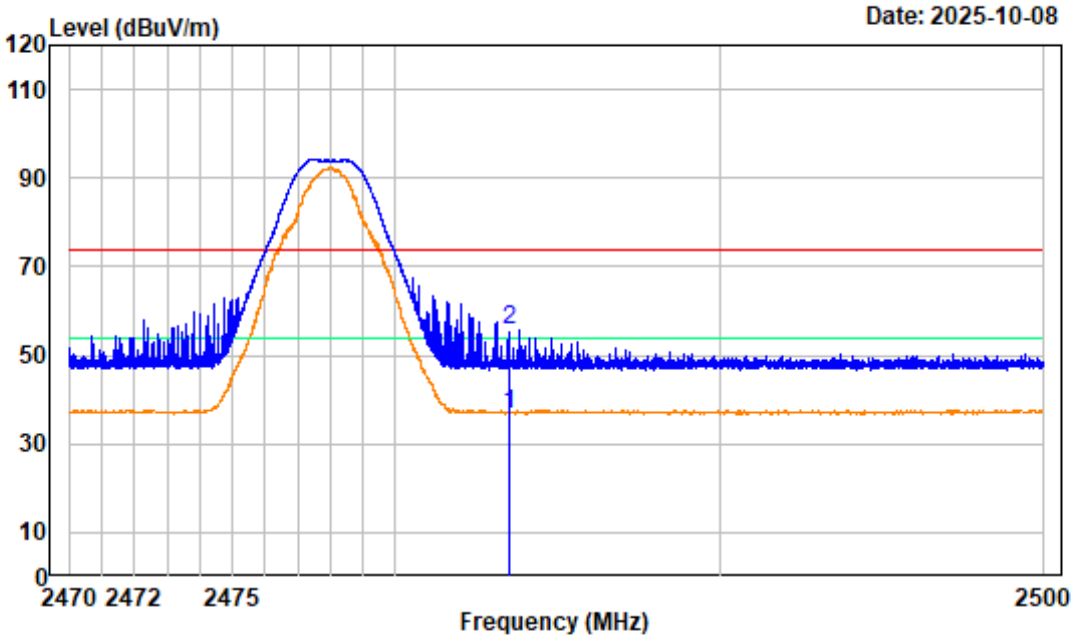
BLE 2M High Channel 4GHz-18GHz_VERTICAL



Site : chamber
Condition : 3m VERTICAL
Project No.: 2504X28433E-RF
Test Mode : Transmitting Tester:Kevin Lv
Note : BLE 2M High Channel 2478MHz 4GHz-18GHz
SA setting : Peak:RBW:1MHz,VBW:3MHz Ave:RBW:1MHz,VBW:5kHz

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	4956.000	-6.35	50.53	44.18	74.00	-29.82	Peak
2	7434.000	-1.03	52.10	51.07	74.00	-22.93	Peak

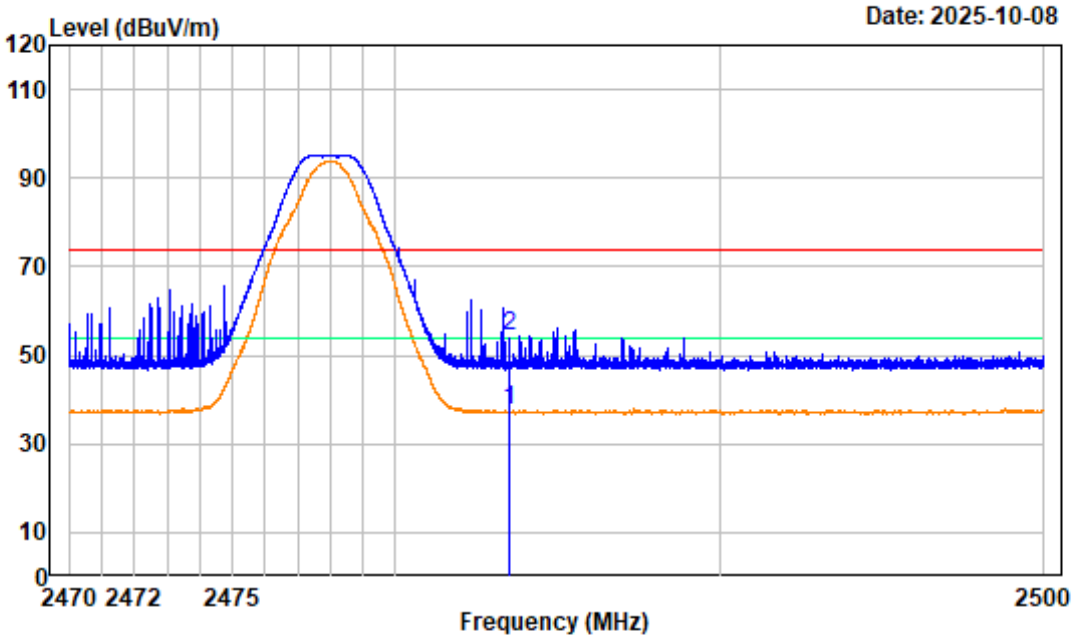
BLE 2M High Channel Bandedge_HORIZONTAL



Site : chamber
Condition : 3m HORIZONTAL
Project No.: 2504X28433E-RF
Test Mode : Transmitting Tester:Kevin Lv
Note : BLE 2M High Channel 2478MHz Bandedge
SA setting : Peak:RBW:1MHz,VBW:3MHz Ave:RBW:1MHz,VBW:5kHz

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	2483.500	-10.23	46.99	36.76	54.00	-17.24	average
2	2483.500	-10.23	65.95	55.72	74.00	-18.28	peak

BLE 2M High Channel Bandedge_VERTICAL



Site : chamber
Condition : 3m VERTICAL
Project No.: 2504X28433E-RF
Test Mode : Transmitting Tester:Kevin Lv
Note : BLE 2M High Channel 2478MHz Bandedge
SA setting : Peak:RBW:1MHz,VBW:3MHz Ave:RBW:1MHz,VBW:5kHz

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	2483.500	-10.23	47.68	37.45	54.00	-16.55	average
2	2483.500	-10.23	64.65	54.42	74.00	-19.58	peak

6 dB EMISSION BANDWIDTH & OCCUPIED BANDWIDTH

Applicable Standard

According to FCC §15.247(a)(2), systems using digital modulation techniques may operate in the 902-928 MHz, 2400-2483.5 MHz, and 5725–5850 MHz bands. The minimum 6 dB bandwidth shall be at least 500 kHz.

Test Procedure

According to ANSI C63.10-2020, section 11.8 and section 6.9

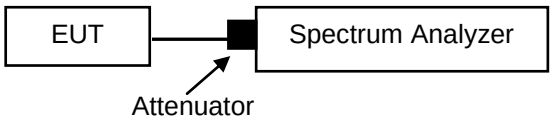
The steps for the first option are as follows:

a) Set RBW = shall be in the range of 1% to 5% of the OBW but not less than 100 kHz.
b) Set the VBW ≥ [3 × RBW].
c) Detector = peak.
d) Trace mode = max-hold.
e) Sweep = No faster than coupled (auto) time.
f) Allow the trace to stabilize.
g) Measure the maximum width of the emission by placing two markers, one at the lowest frequency and the other at the highest frequency of the envelope of the spectral display, such that each marker is at or slightly below the "−6 dB down amplitude". If a marker is below this "−6 dB down amplitude" value, then it shall be as close as possible to this value.

According to ANSI C63.10-2020, section 7.8.6 and section 6.9.3

The occupied bandwidth is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers are each equal to 0.5% of the total mean power of the given emission. The following procedure shall be used for measuring 99% power bandwidth:

a) The instrument center frequency is set to the nominal EUT channel center frequency. The frequency span for the spectrum analyzer shall be between 1.5 times and 5.0 times the OBW.
b) The nominal IF filter bandwidth (3 dB RBW) shall be in the range of 1% to 5% of the OBW, and VBW shall be at least three times the RBW, unless otherwise specified by the applicable requirement.
c) Set the reference level of the instrument as required, keeping the signal from exceeding the maximum input mixer level for linear operation. In general, the peak of the spectral envelope shall be more than [10 log (OBW/RBW)] below the reference level. Specific guidance is given in 4.1.6.2.
d) Step a) through step c) might require iteration to adjust within the specified range.
e) Video averaging is not permitted. Where practical, a sample detection and single sweep mode shall be used. Otherwise, peak detection and max-hold mode (until the trace stabilizes) shall be used.
f) Use the 99% power bandwidth function of the instrument (if available) and report the measured bandwidth.
g) If the instrument does not have a 99% power bandwidth function, then the trace data points are recovered and directly summed in linear power terms. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5% of the total is reached; that frequency is recorded as the lower frequency. The process is repeated until 99.5% of the total is reached; that frequency is recorded as the upper frequency. The 99% power bandwidth is the difference between these two frequencies.
h) The occupied bandwidth shall be reported by providing spectral plot(s) of the measuring instrument display; the plot axes and the scale units per division shall be clearly labeled. Tabular data may be reported in addition to the plot(s).



Note: Offset=RF cable loss(0.5dB#)+ Attenuator(10dB)

Test Data

Test Result: Compliance. Please refer to the Appendix.

MAXIMUM CONDUCTED OUTPUT POWER

Applicable Standard

According to FCC §15.247(b) (3), for systems using digital modulation in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands: 1 Watt. As an alternative to a peak power measurement, compliance with the one Watt limit can be based on a measurement of the maximum conducted output power. Maximum Conducted Output Power is defined as the total transmit power delivered to all antennas and antenna elements averaged across all symbols in the signaling alphabet when the transmitter is operating at its maximum power control level. Power must be summed across all antennas and antenna elements. The average must not include any time intervals during which the transmitter is off or is transmitting at a reduced power level. If multiple modes of operation are possible (e.g., alternative modulation methods), the maximum conducted output power is the highest total transmit power occurring in any mode.

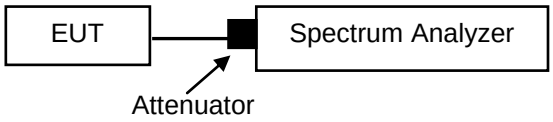
Test Procedure

According to ANSI C63.10-2020, section 11.9.1.1

• Measurement using a spectrum analyzer (SA)

The following procedure shall be used when an instrument with a resolution bandwidth that is greater than the DTS bandwidth is available to perform the measurement:

a) Set the RBW ≥ DTS bandwidth.
b) Set VBW ≥ [3 × RBW].
c) Set span ≥ [3 × RBW].
d) Sweep time = No faster than coupled (auto) time.
e) Detector = peak.
f) Trace mode = max-hold.
g) Allow trace to fully stabilize.
h) Use peak marker function to determine the peak amplitude level.



Note: Offset=RF cable loss(0.5dB#)+ Attenuator(10dB)

Test Data

Test Result: Compliance. Please refer to the Appendix.

CONDUCTED SPURIOUS EMISSION

Applicable Standard

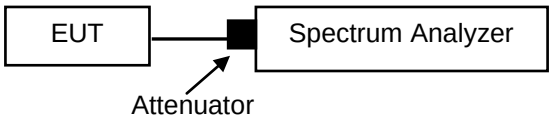
According to FCC §15.247(d), in any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

Test Procedure

According to ANSI C63.10-2020, section 11.11

a) Set the center frequency and span to encompass frequency range to be measured. Note that the frequency range might need to be divided into multiple frequency ranges to retain frequency resolution. NOTE—the number of points can also be increased for large spans to retain frequency resolution
b) Set the RBW: 100 kHz
c) Set the VBW ≥ [3 × RBW].
d) Detector = peak.
e) Sweep time = No faster than coupled (auto) time.
f) Trace mode = max-hold.
g) Allow trace to fully stabilize.
h) Use the peak marker function to determine the maximum amplitude level.

Ensure that the amplitude of all unwanted emissions outside of the authorized frequency band (excluding restricted frequency bands) is attenuated by at least the minimum requirements specified in 11.11. Report the three highest emissions relative to the limit.



Note: Offset=RF cable loss(0.5dB#/3.0dB#)+ Attenuator(10dB)
The cable loss of 0.5dB# has been added into test result, except for test result of frequencies from 30 MHz to 25 GHz, where a maximum cable loss of 3.0dB# has been added.

Test Data

Test Result: Compliance. Please refer to the Appendix.

POWER SPECTRAL DENSITY

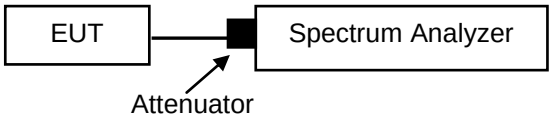
Applicable Standard

According to FCC §15.247(e), for digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission. This power spectral density shall be determined in accordance with the provisions of paragraph (b) of this section. The same method of determining the conducted output power shall be used to determine the power spectral density.

Test Procedure

According to ANSI C63.10-2020, section 11.10.2

a) Set analyzer center frequency to DTS channel center frequency.
b) Set the span >1.5 times the DTS bandwidth.
c) Set the RBW to 3 kHz ≤ RBW ≤ 100 kHz.
d) Set the VBW ≥ [3 × RBW].
e) Detector = peak.
f) Sweep time = No faster than coupled (auto) time.
g) Trace mode = max-hold.
h) Allow trace to fully stabilize.
i) Use the peak marker function to determine the maximum amplitude level within the RBW.
j) If measured value exceeds requirement, then reduce RBW (but no less than 3 kHz) and repeat.



Note: Offset=RF cable loss(0.5dB#)+ Attenuator(10dB)

Test Data

Test Result: Compliance. Please refer to the Appendix.

DUTY CYCLE

Test Procedure

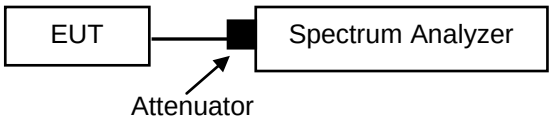
According to ANSI C63.10-2020 Section 11.6

Measurements of duty cycle and transmission duration shall be performed using one of the following techniques:

a) A diode detector and an oscilloscope that together have a sufficiently short response time to permit accurate measurements of the ON and OFF times of the transmitted signal.

b) The zero-span mode on a spectrum analyzer or EMI receiver if the response time and spacing between bins on the sweep are sufficient to permit accurate measurements of the ON and OFF times of the transmitted signal:

1) Set the center frequency of the instrument to the center frequency of the transmission.
2) Set RBW ≥ OBW if possible; otherwise, set RBW to the largest available value.
3) Set VBW ≥ RBW. Set detector = peak or average.
4) The zero-span measurement method shall not be used unless both RBW and VBW are > 50/T and the number of sweep points across duration T exceeds 100. (For example, if VBW and/or RBW are limited to 3 MHz, then the zero-span method of measuring the duty cycle shall not be used if T ≤ 16.7 μs.)



Note: Offset=RF cable loss(0.5dB#)+ Attenuator(10dB)

Test Data

Test Result: Compliance. Please refer to the Appendix.

APPENDIX

Test Information:

Sample No.:	3ABO-4	**Test Date:**	2025/10/22~2025/11/25
Test Site:	RF	**Test Mode:**	Transmitting
Tester:	Cayde Hou	**Test Result:**	Pass

Environmental Conditions:

Temperature: (°C)	22.7-26.2	**Relative Humidity: (%)**	43-45	**ATM Pressure: (kPa)**	100.7-101.1

6dB Emission Bandwidth

BLE 1M

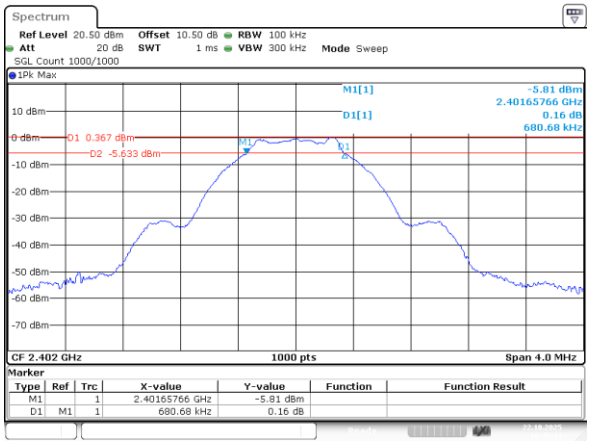
Channel	Result (MHz)	Limit (MHz)	Verdict
Low	0.681	≥0.5	Pass
Middle	0.677	≥0.5	Pass
High	0.677	≥0.5	Pass

BLE 2M

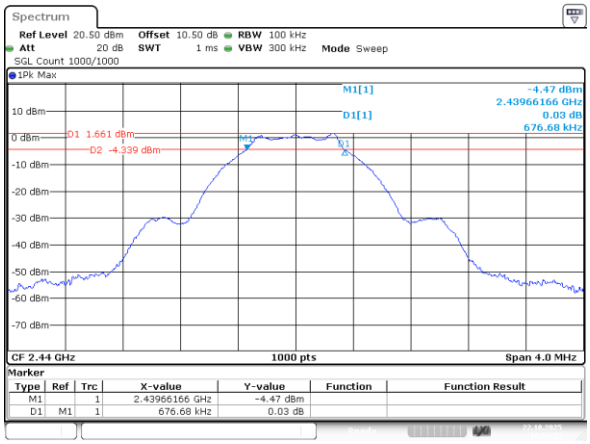
Channel	Result (MHz)	Limit (MHz)	Verdict
Low	1.189	≥0.5	Pass
Middle	1.189	≥0.5	Pass
High	1.201	≥0.5	Pass

BLE 1M

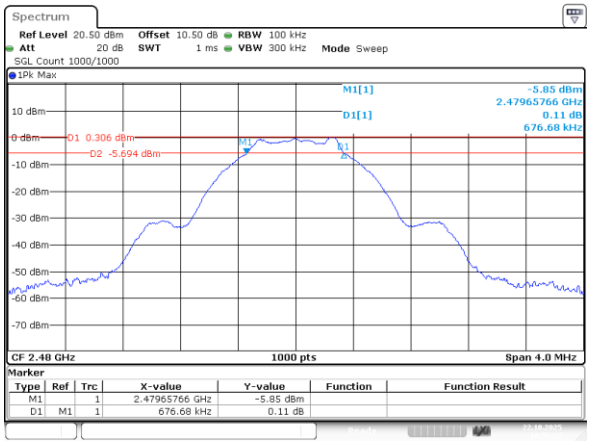
BLE_1M_Low_Channel



BLE_1M_Middle_Channel

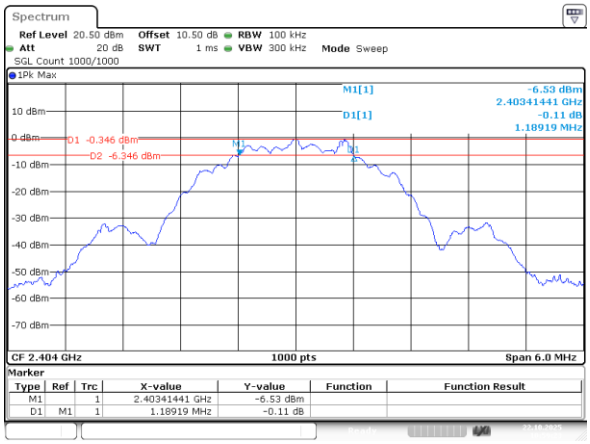


BLE_1M_High_Channel

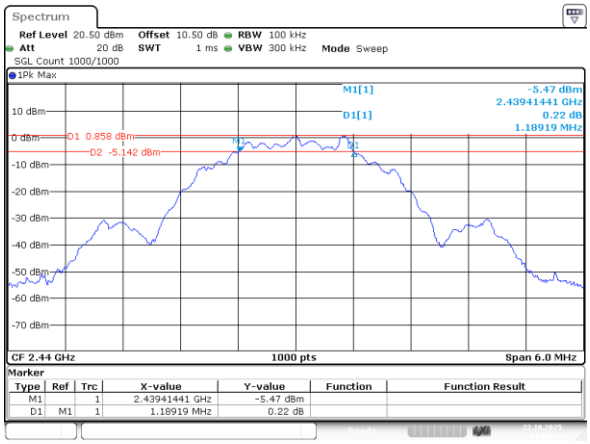


BLE 2M

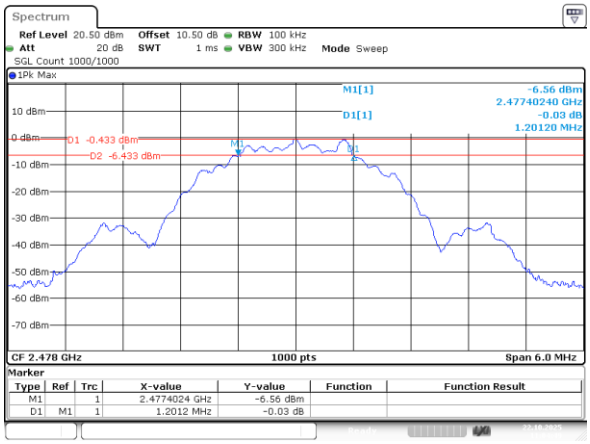
BLE_2M_Low_Channel



BLE_2M_Middle_Channel



BLE_2M_High_Channel



99% Occupied Bandwidth

BLE 1M

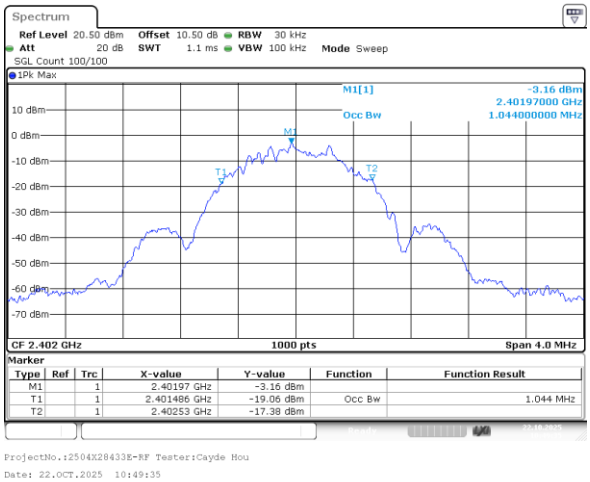
Channel	99% OBW (MHz)
Low	1.044
Middle	1.040
High	1.032

BLE 2M

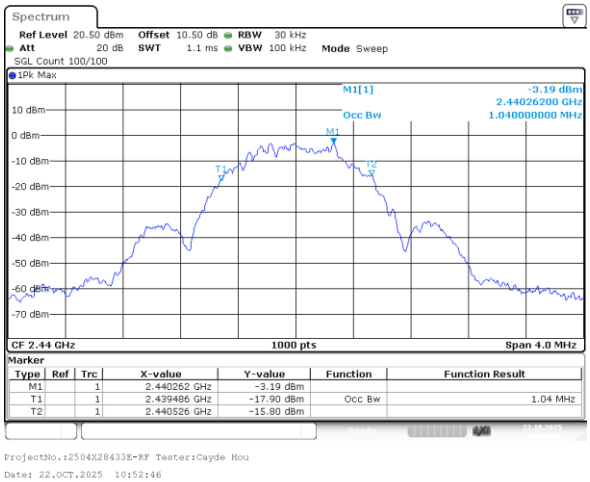
Channel	99% OBW (MHz)
Low	2.070
Middle	2.064
High	2.070

BLE 1M

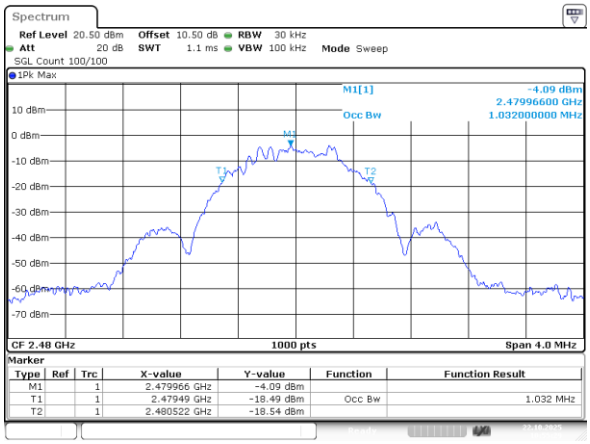
BLE_1M_Low_Channel



BLE_1M_Middle_Channel

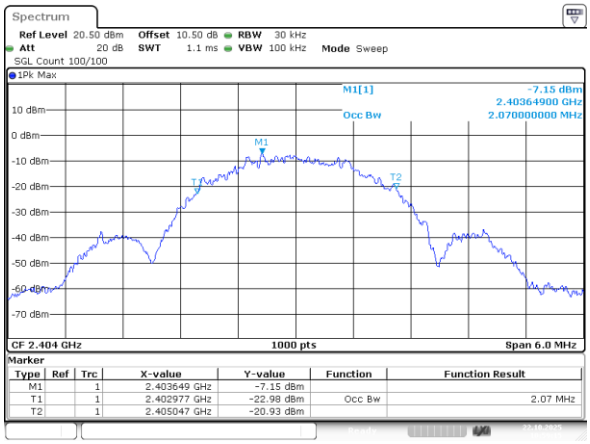


BLE_1M_High_Channel

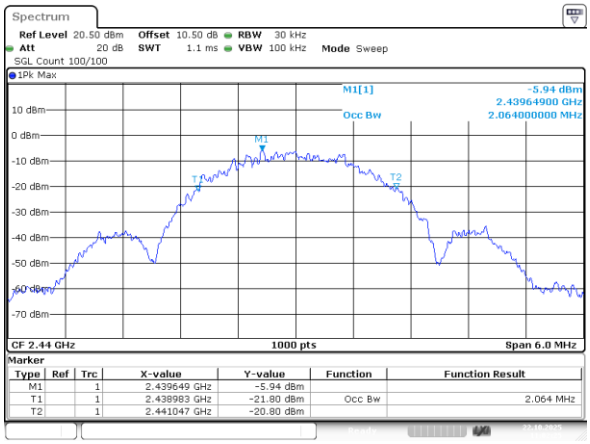


BLE 2M

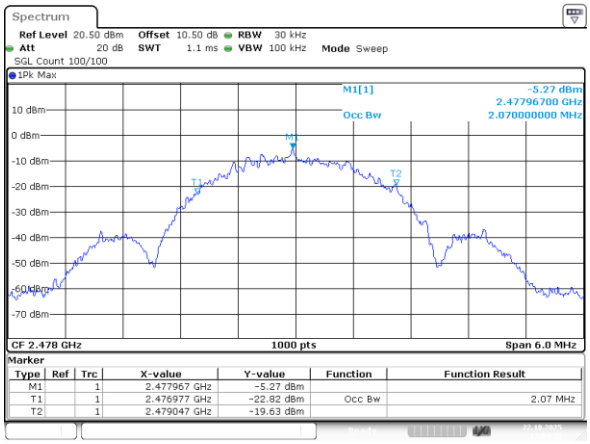
BLE_2M_Low_Channel



BLE_2M_Middle_Channel



BLE_2M_High_Channel



Maximum Conducted Output Power

BLE 1M

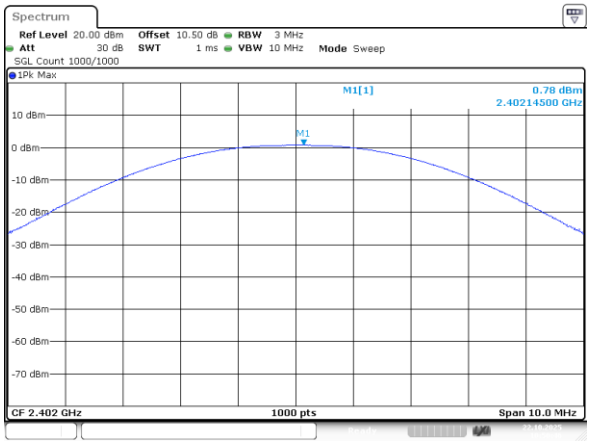
Channel	Peak Output Power (dBm)	Limit (dBm)	Verdict
Low	0.78	30.00	Pass
Middle	2.00	30.00	Pass
High	0.67	30.00	Pass

BLE 2M

Channel	Peak Output Power (dBm)	Limit (dBm)	Verdict
Low	0.79	30.00	Pass
Middle	1.99	30.00	Pass
High	0.67	30.00	Pass

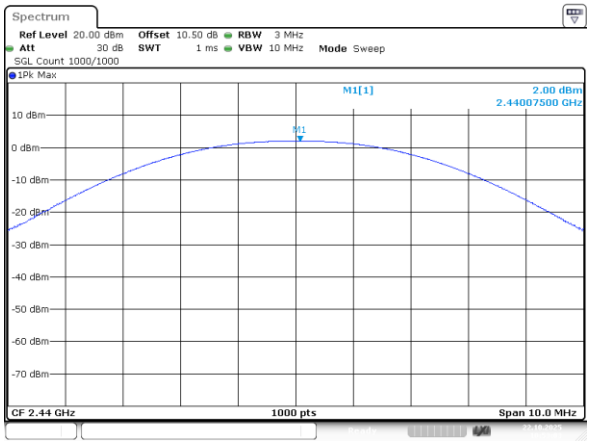
BLE 1M

BLE_1M_Low_Channel



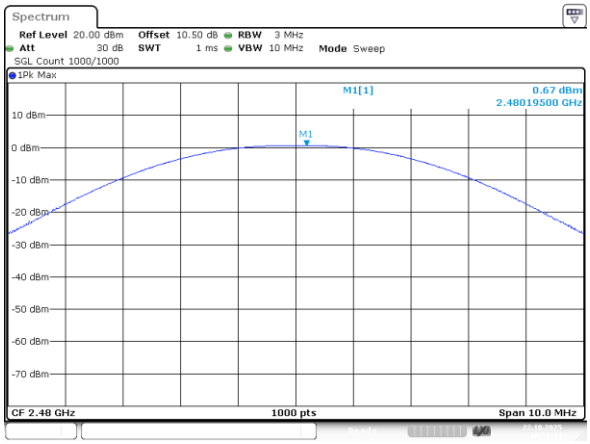
ProjectNo.:2504X28433E-RF Tester:Cayde Hou
Date: 22.OCT.2025 10:50:46

BLE_1M_Middle_Channel



ProjectNo.:2504X28433E-RF Tester:Cayde Hou
Date: 22.OCT.2025 10:53:03

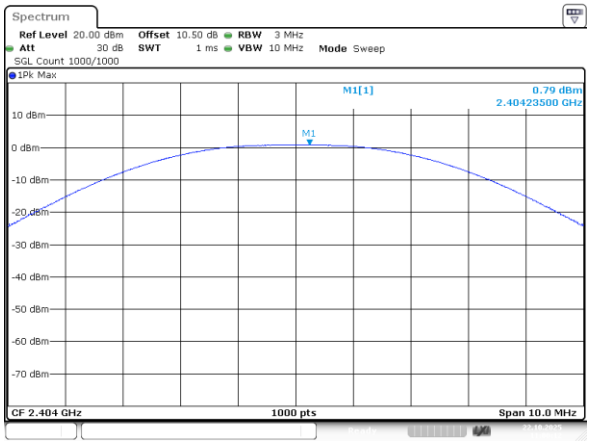
BLE_1M_High_Channel



ProjectNo.:2504X28433E-RF Tester:Cayde Hou
Date: 22.OCT.2025 10:56:44

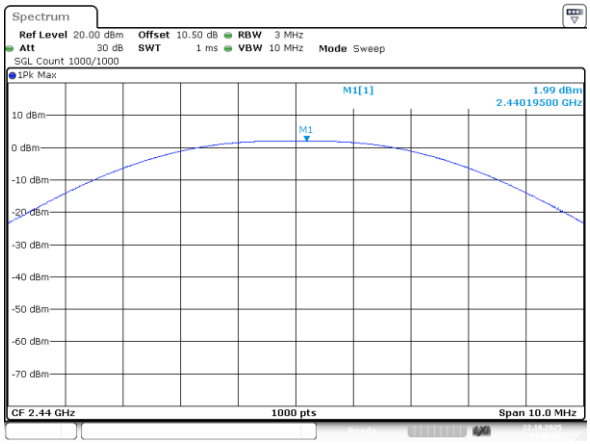
BLE 2M

BLE_2M_Low_Channel



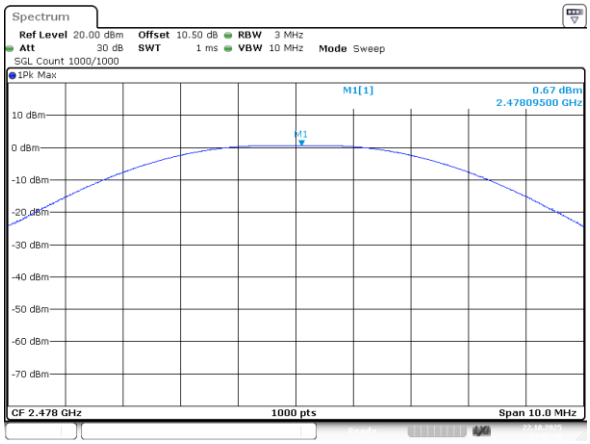
ProjectNo.:2504X28433E-RF Tester:Cayde Hou
Date: 22.OCT.2025 11:00:12

BLE_2M_Middle_Channel



ProjectNo.:2504X28433E-RF Tester:Cayde Hou
Date: 22.OCT.2025 11:02:42

BLE_2M_High_Channel



ProjectNo.:2504X28433E-RF Tester:Cayde Hou
Date: 22.OCT.2025 11:05:48

Power Spectral Density

BLE 1M

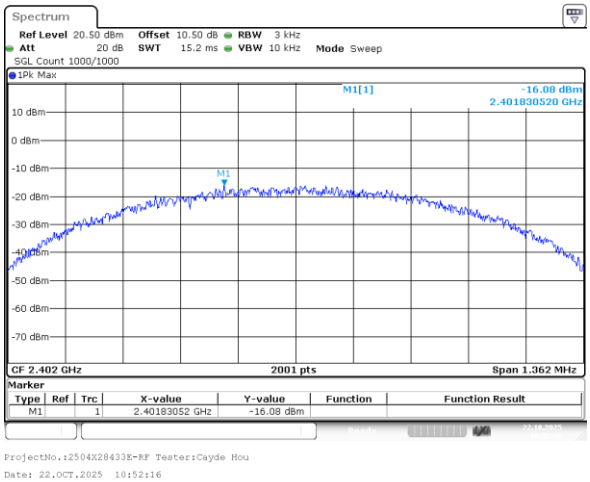
Channel	Result (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
Low	-16.08	8	Pass
Middle	-14.76	8	Pass
High	-16.25	8	Pass

BLE 2M

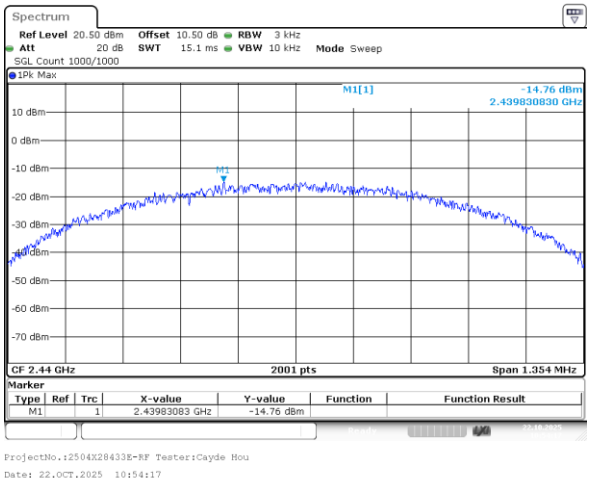
Channel	Result (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
Low	-18.09	8	Pass
Middle	-16.86	8	Pass
High	-18.16	8	Pass

BLE 1M

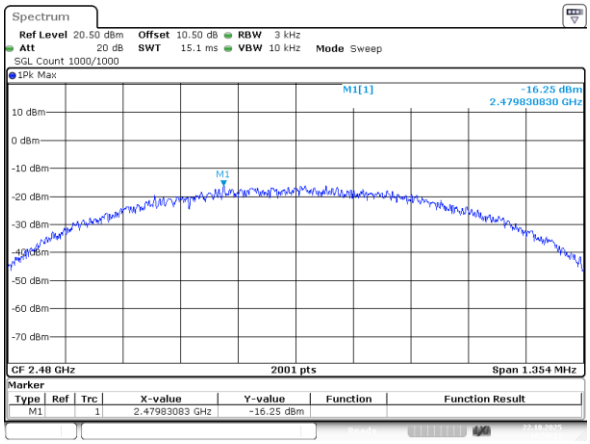
BLE_1M_Low_Channel



BLE_1M_Middle_Channel

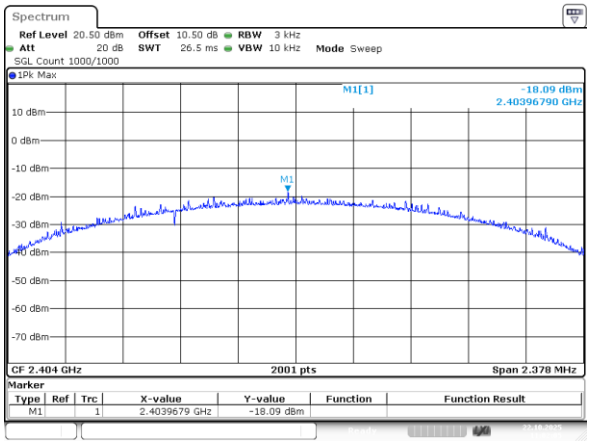


BLE_1M_High_Channel

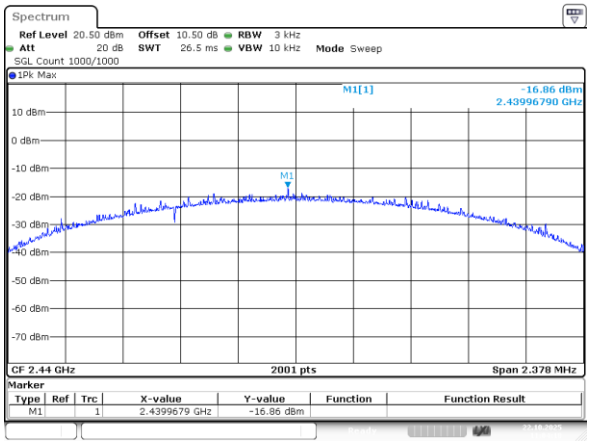


BLE 2M

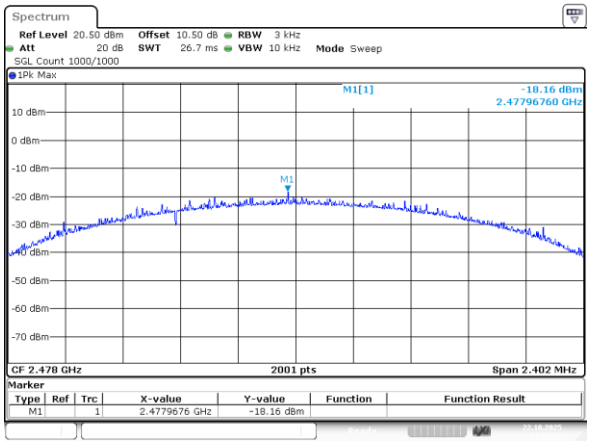
BLE_2M_Low_Channel



BLE_2M_Middle_Channel



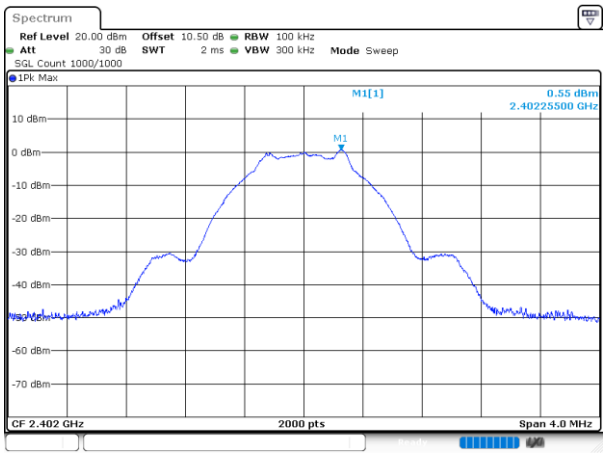
BLE_2M_High_Channel



Conducted Spurious Emission

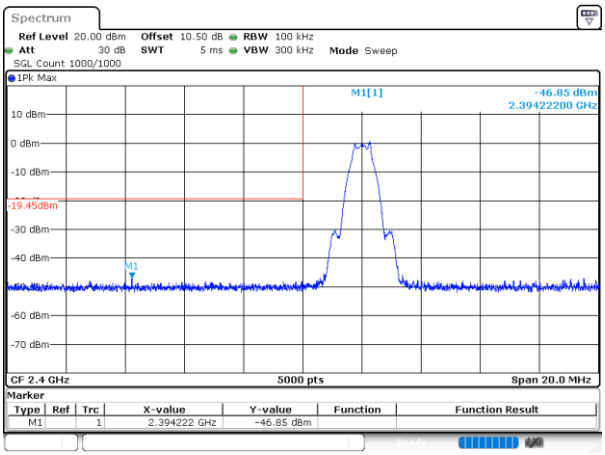
BLE 1M

BLE_1M_Low_Channel



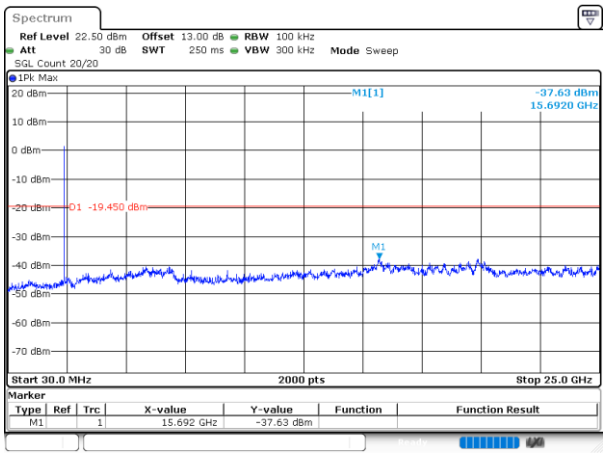
ProjectNo.:2504X28433E-RF Tester:Cayde Hou
Date: 24.NOV.2025 19:16:17

BLE_1M_Low_Channel



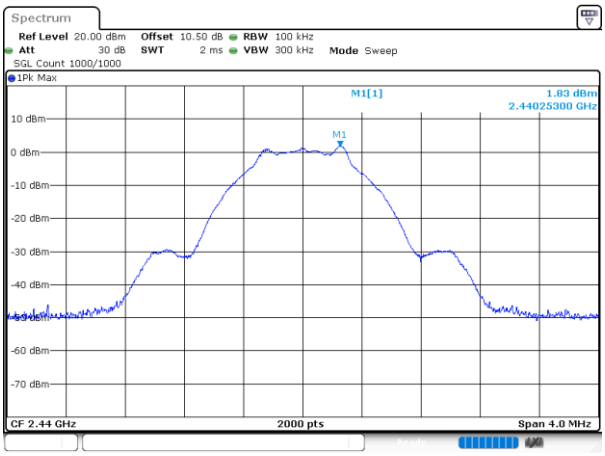
ProjectNo.:2504X28433E-RF Tester:Cayde Hou
Date: 24.NOV.2025 19:16:41

BLE_1M_Low_Channel



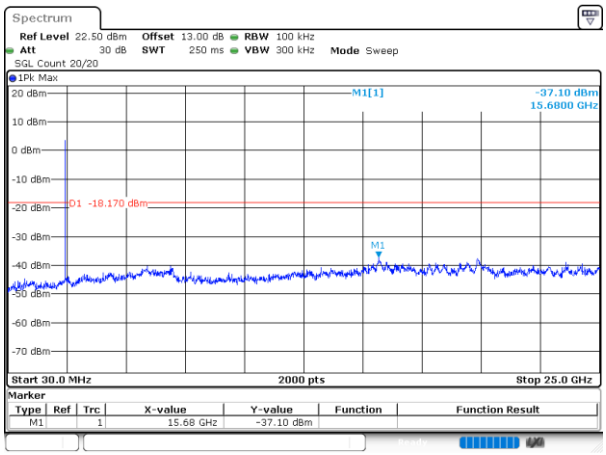
ProjectNo.:2504X28433E-RF Tester:Cayde Hou
Date: 24.NOV.2025 19:17:08

BLE_1M_Middle_Channel



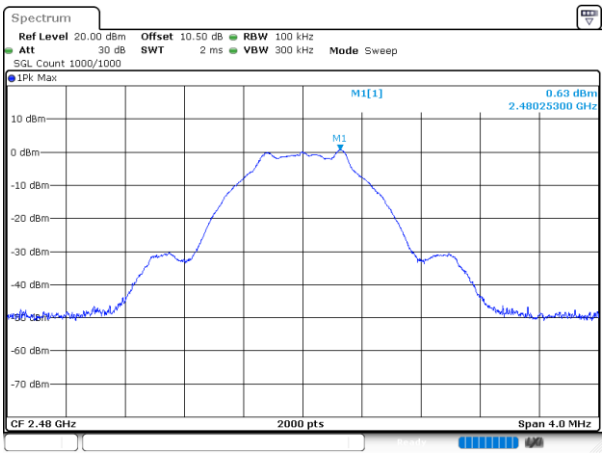
ProjectNo.:2504X28433E-RF Tester:Cayde Hou
Date: 24.NOV.2025 19:18:17

BLE_1M_Middle_Channel



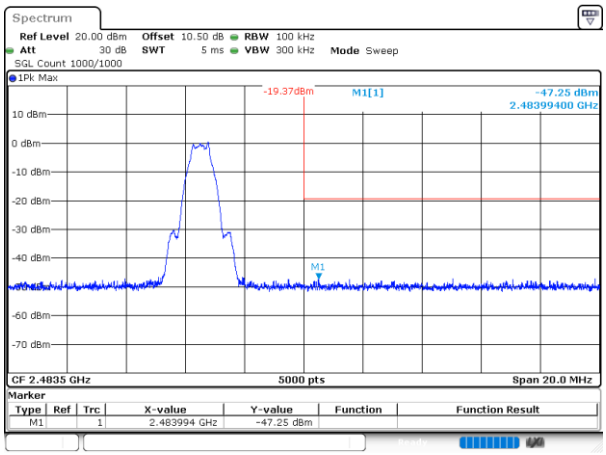
ProjectNo.:2504X28433E-RF Tester:Cayde Hou
Date: 24.NOV.2025 19:18:47

BLE_1M_High_Channel

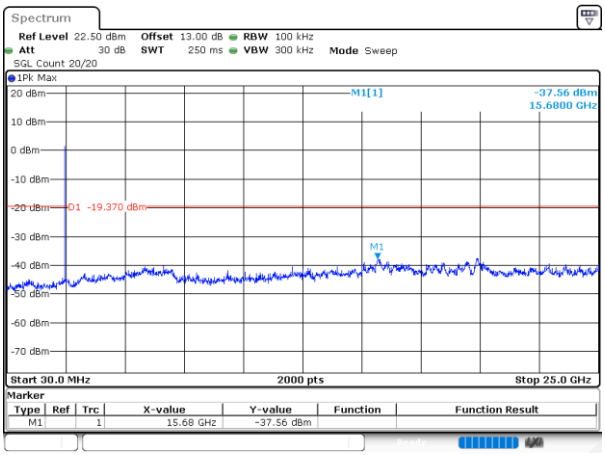


ProjectNo.:2504X28433E-RF Tester:Cayde Hou
Date: 25.NOV.2025 14:06:09

BLE_1M_High_Channel

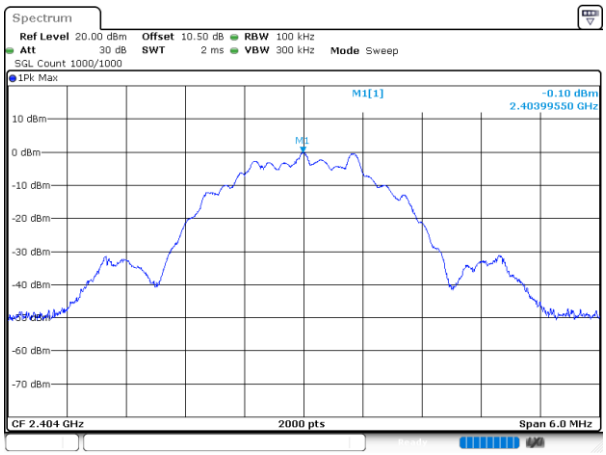


BLE_1M_High_Channel

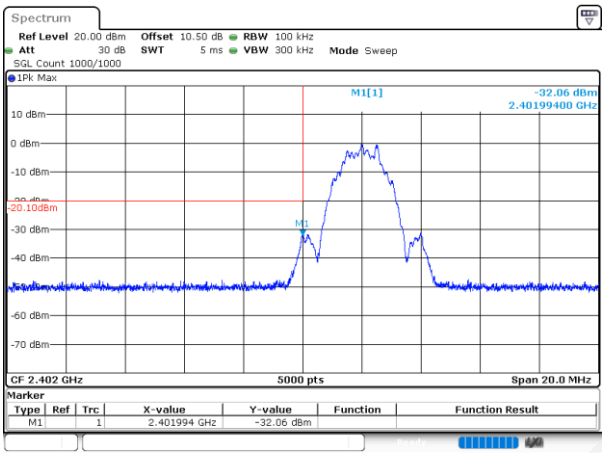


BLE 2M

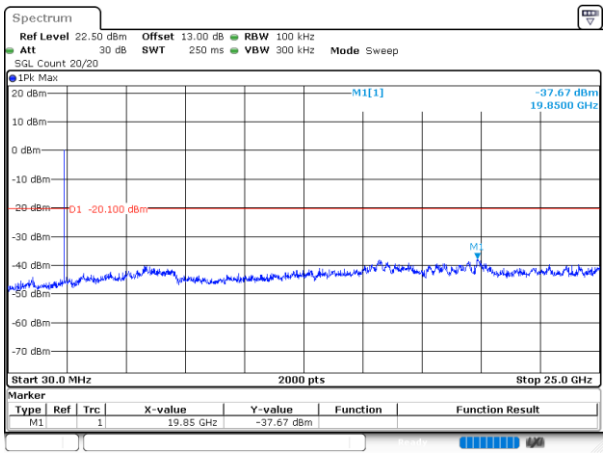
BLE_2M_Low_Channel



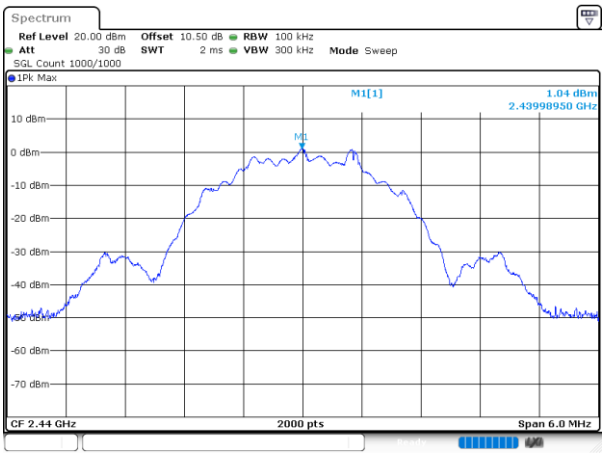
BLE_2M_Low_Channel



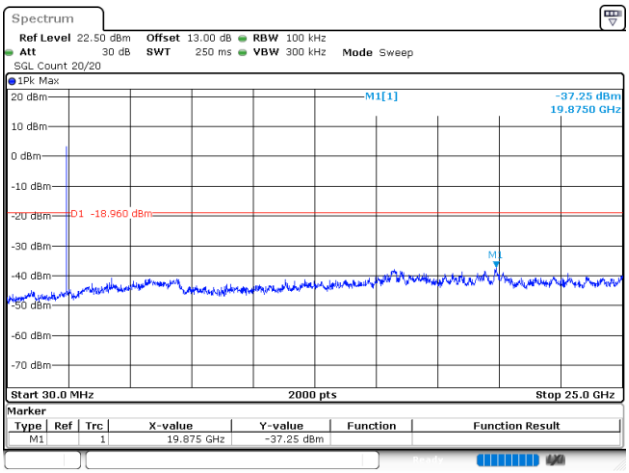
BLE_2M_Low_Channel



BLE_2M_Middle_Channel

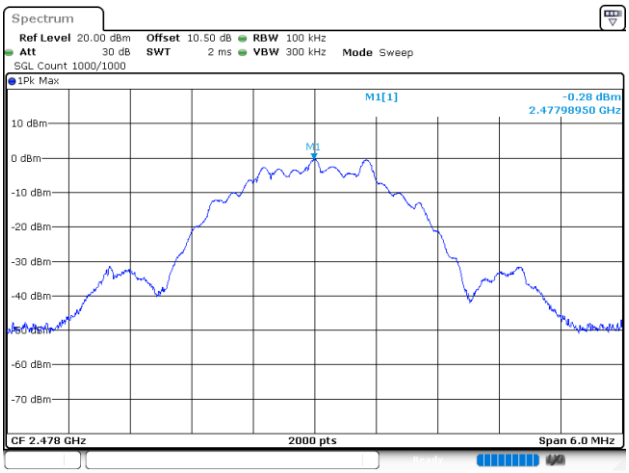


BLE_2M_Middle_Channel



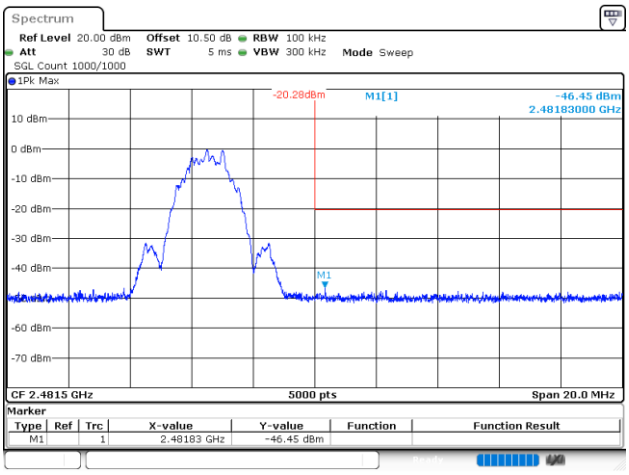
ProjectNo.:2504X28433E-RF Tester:Cayde Hou
Date: 24.NOV.2025 19:23:49

BLE_2M_High_Channel



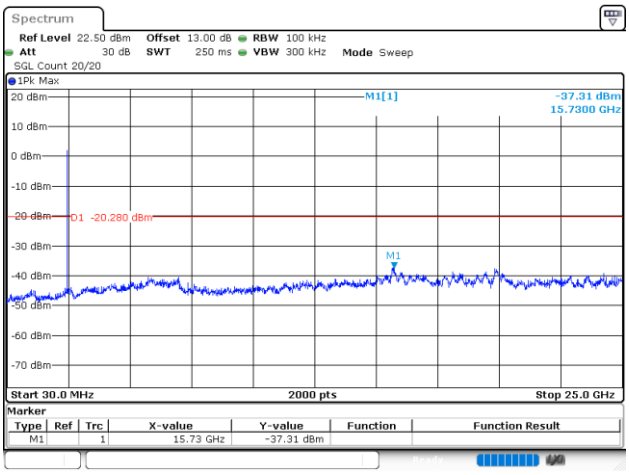
ProjectNo.:2504X28433E-RF Tester:Cayde Hou
Date: 24.NOV.2025 19:24:27

BLE_2M_High_Channel



ProjectNo.:2504X28433E-RF Tester:Cayde Hou
Date: 24.NOV.2025 19:24:46

BLE_2M_High_Channel



ProjectNo.:2504X28433E-RF Tester:Cayde Hou
Date: 24.NOV.2025 19:25:14

Duty Cycle

BLE 1M

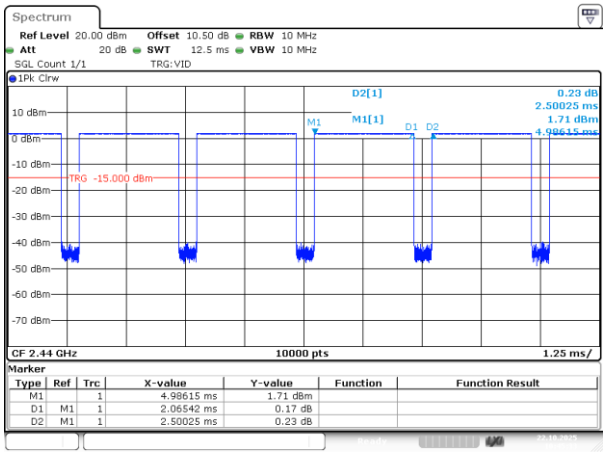
Channel	Ton (ms)	Ton+Toff (ms)	Duty Cycle (%)	Duty Cycle Factor(dB)	1/Ton (Hz)	VBW Setting (kHz)
Middle	2.065	2.500	82.61	0.83	484	0.500

BLE 2M

Channel	Ton (ms)	Ton+Toff (ms)	Duty Cycle (%)	Duty Cycle Factor(dB)	1/Ton (Hz)	VBW Setting (kHz)
Middle	1.071	1.884	56.83	2.45	934	1

BLE 1M

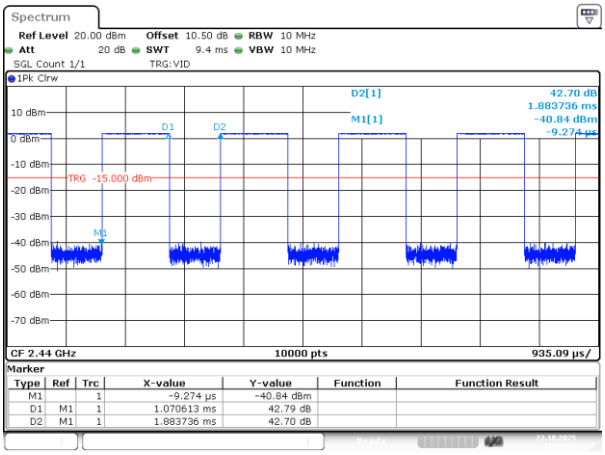
BLE_1M_Middle_Channel



ProjectNo.:2504X28433E-RF Tester:Cayde Hou
Date: 22.OCT.2025 10:45:33

BLE 2M

BLE_2M_Middle_Channel



ProjectNo.:2504X28433E-RF Tester:Cayde Hou
Date: 22.OCT.2025 10:47:04

EXHIBIT A-EUT PHOTOGRAPHS

Please refer to the Attachment No.1 2504X28433E-RF EUT External Photos and Attachment No.2 2504X28433E-RF EUT Internal Photos.

EXHIBIT B-TEST SETUP PHOTOGRAPHS

Please refer to the Attachment No.3 2504X28433E-RF-00A Test Photos.

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