

Project No: TM-2503000493P
Report No.: TMWK2503001448KR

FCC ID: 2BNM4TURBOXC865C

Page 1 / 45
Rev. 00

RADIO TEST REPORT

FCC 47 CFR PART 15 SUBPART C

(CLASS II PERMISSIVE CHANGE)

Test Standard	FCC Part 15.247
Product name	Smart Module
Brand Name	STORZ KARL STORZ—ENDOSKOPE
Model No.	C865C
Test Result	Pass
Statements of Conformity	Determination of compliance is based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

The test Result was tested by Compliance Certification Services Inc. The test data, data evaluation, test procedures, and equipment configurations shown in this report were given in ANSI C63.10-2020 and compliance standards.

The test results of this report relate only to the tested sample (EUT) identified in this report.

The test Report of full or partial shall not copy. Without written approval of Compliance Certification Services Inc. (Wugu Laboratory)

Approved by:



Shawn Wu
Supervisor

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com.tw/Terms-and-Conditions> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com.tw/Terms-and-Conditions>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of client's instruction, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced, except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



Project No: TM-2503000493P
Report No.: TMWK2503001448KR

Page 2 / 45
Rev. 00

Revision History

Rev.	Issue Date	Revisions	Effect Page	Revised By
00	Jane 15, 2026	Initial Issue	ALL	Peggy Tsai

Table of contents

1.	GENERAL INFORMATION	4
1.1	EUT INFORMATION	4
1.2	EUT CHANNEL INFORMATION	6
1.3	ANTENNA INFORMATION	6
1.4	MEASUREMENT UNCERTAINTY.....	7
1.5	FACILITIES AND TEST LOCATION	7
1.6	INSTRUMENT CALIBRATION	8
1.7	SUPPORT AND EUT ACCESSORIES EQUIPMENT	10
1.8	TEST SETUP DIAGRAM.....	11
1.9	TEST PROGRAM	11
1.10	TEST METHODOLOGY AND APPLIED STANDARDS	11
2.	TEST SUMMARY	12
3.	DESCRIPTION OF TEST MODES.....	13
3.1	THE WORST MODE OF OPERATING CONDITION	13
3.2	THE WORST MODE OF MEASUREMENT	14
4.	TEST RESULT	15
4.1	AC POWER LINE CONDUCTED EMISSION	15
4.2	OUTPUT POWER MEASUREMENT	18
4.3	RADIATION BANDEDGE AND SPURIOUS EMISSION	20
	APPENDIX-A TEST PHOTO	A-1

1. GENERAL INFORMATION

1.1 EUT INFORMATION

Applicant	KARL STORZ SE & Co. KG Dr.-Karl-Storz-Strasse 34, 78532 Tuttlingen, Germany	
Manufacturer	CYPRESS TECHNOLOGY CO., LTD. ZHONGHE PLANT 3 4F., No. 156, Jiankang Rd, Zhonghe Dist, New Taipei City 235603, Taiwan(R.O.C)	
Equipment	Smart Module	
Brand Name	 KARL STORZ – ENDOSKOPE	
Model Name	C865C	
Model Discrepancy	N/A	
Host Equipment	OR1 Control Tablet 11"	
Host model	WM400 OR1 Control Tablet 11", WM40000 OR1 Control Tablet Interface Extension, WM40002 OR1 Control Tablet Mounting Sleeve	
Host Model Discrepancy	Name	Difference
	WM400 OR1 Control Tablet 11"	Tablet
	WM40000 OR1 Control Tablet Interface Extension	Extension Box
	WM40002 OR1 Control Tablet Mounting Sleeve	Sleeve
Received Date	March 31, 2025	
Date of Test	June 27 ~ July 8, 2025	
Power Supply	1. Power from Host System (DC 3.6V) 2. Power from Adapter. ELJINTEK / GMPD451-1C I/P: 100-240Vac, 50/60Hz, 0.4-1.2A O/P: 5Vdc, 3A ; 9Vdc, 3A ; 12Vdc, 3A ; 15Vdc, 3A ; 20Vdc, 2.25A, 45W MAX 3. Power from Battery. APack / BAT-1-00387-CCS-01 Rating: 4.2Vdc, 8080mAh	

Class II Permissive Change	1. The product was originally granted by the FCC on 06/11/2025 under FCC ID: 2BNM4TURBOXC865C. The purpose of this Class II Permissive Change application is to allow integration of the certified module (FCC ID: 2BNM4TURBOXC865C) into the OR1 Control Tablet (Model: WM400 OR1 Control Tablet 11”), which is classified as a portable host device. The module integrated in the host platform remains electronically and mechanically identical to the originally certified module, and the software security features remain unchanged. 2. The RF output power has been reduced in order to comply with SAR requirements. 3. The antenna type has been changed. As a result of this change, a complete Radiated Spurious Emissions (RSE) evaluation has been performed to ensure continued compliance with FCC requirements.
--	---

Remark:

1. For more details, please refer to the User’s manual of the EUT.
2. Disclaimer: Antenna information is provided by the applicant, test results of this report are applicable to the sample EUT received.

1.2 EUT CHANNEL INFORMATION

Frequency Range	2402MHz-2480MHz
Modulation Type	GFSK for BLE 1 Mbps GFSK for BLE 2 Mbps
Number of channels	40 Channels

Remark:

Refer as ANSI C63.10-2020 for test channels

Number of frequencies to be tested		
Frequency range in which device operates	Number of frequencies	Location in frequency range of operation
☐ 1 MHz or less	1	Middle
☐ 1 MHz to 10 MHz	2	1 near top and 1 near bottom
☒ More than 10 MHz	3	1 near top, 1 near middle, and 1 near bottom

1.3 ANTENNA INFORMATION

Antenna Specification	☒ PIFA ☐ PCB ☐ Dipole ☐ Coils
Antenna Gain	Gain: 3.19 dBi
Brand / Model	ARISTOTLE / RFA-25-JP267-4B-150

Notes:

1. The antenna(s) of the EUT are permanently attached and there are no provisions for connection to an external antenna. So the EUT complies with the requirements of §15.203.

1.4 MEASUREMENT UNCERTAINTY

PARAMETER	UNCERTAINTY
AC Powerline Conducted Emission	± 2.213 dB
RF output power (Power Meter + Power sensor)	± 0.243 dB
Radiated Emission_9kHz-30MHz	± 3.761 dB
Radiated Emission_30MHz-200MHz	± 3.473 dB
Radiated Emission_200MHz-1GHz	± 3.946 dB
Radiated Emission_1GHz-6GHz	± 3.797 dB
Radiated Emission_6GHz-18GHz	± 4.803 dB
Radiated Emission_18GHz-26GHz	± 3.459 dB
Radiated Emission_26GHz-40GHz	± 3.297 dB

Remark:

- 1.This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2
2. ISO/IEC 17025 requires that an estimate of the measurement uncertainties associated with the emissions test results be included in the report.

1.5 FACILITIES AND TEST LOCATION

All measurement facilities used to collect the measurement data are located at

☒ No.11, Wugong 6th Rd., Wugu Dist., New Taipei City, Taiwan.

CAB identifier: TW1309

Test site	Test Engineer	Remark
AC Conduction Room	David Li	-
Radiation	Tony Chao	-
RF Conducted	Marco Chan	-

Remark: The lab has been recognized as the FCC accredited lab. under the KDB 974614 D01 and is listed in the FCC pubic Access Link (PAL) database, FCC Registration No. :444940, the FCC Designation No.:TW1309

1.6 INSTRUMENT CALIBRATION

Conducted_FCC/IC/NCC (All)					
Name of Equipment	Manufacturer	Model	Serial Number	Calibration Date	Calibration Due
EXA Signal Analyzer	Keysight	N9010B	MY55460167	2025-06-13	2026-06-12
Power Sensor	Anritsu	MA2411B	1911387	2024-08-30	2025-08-29
Power Sensor	Anritsu	MA2411B	1911386	2024-07-19	2025-07-18
Power Meter	Anritsu	ML2496A	2136002	2024-07-19	2025-07-18
DC Blocks	Marvelous Microwave	MVE6411	MVE-001	2024-08-08	2025-08-07
Software	Radio Test Software Ver. 21				

AC Mains Conduction					
Name of Equipment	Manufacturer	Model	Serial Number	Calibration Date	Calibration Due
EMI Test Receiver	R&S	ESCI	100064	2025-06-02	2026-06-01
LISN	TESEQ	LN2-16N	22012	2025-02-23	2026-02-22
Cable	Woken	RFC-SMA-100-NMR-084SFL402	MFR-2Y194	2025-03-21	2026-03-20
Software	e3 V9-210616c				

Remark:

- Each piece of equipment is scheduled for calibration once a year.
- N.C.R. = No Calibration Required.

966A_Radiated					
Name of Equipment	Manufacturer	Model	Serial Number	Calibration Date	Calibration Due
Signal Analyzer	KEYSIGHT	N9010A	MY52220817	2025-03-05	2026-03-04
Active Loop Antenna	COM-POWER	AL-130	121051	2025-02-18	2026-02-17
Thermo-Hygro Meter	HTC	HTC-1	HTC-D06	2025-05-26	2026-05-25
Bi-Log Antenna	Sunol Sciences	JB3	A030105&532	2025-06-26	2026-06-25
Preamplifier	EMEC	EM330	060609	2025-02-20	2026-02-19
Cable	Huber+Suhner	104PEA	20995+21000+182330	2024-08-07	2025-08-06
Horn Antenna	ETC	MCTD 1209	DRH13M02003	2024-12-20	2025-12-19
Preamplifier	HP	8449B	3008A00965	2024-12-18	2025-12-17
Cable	EMCI	EMC101G	221012+230205+250412	2025-04-24	2026-04-23
Attenuator	Mini-Circuits	BW-S9W5	BWS9W5-09-966A-01	2025-02-06	2026-02-05
Site Validation	CCS	966A	N/A	2024-08-03	2025-08-02
High Pass Filters	Titan Microwave	T04H30001800070S01	22011402-4	2025-06-03	2026-06-02
Pre-Amplifier	EMCI	EMC184045SE	980860	2024-12-02	2025-12-01
Horn Antenna	SCHWARZBECK	BBHA9170	1047	2024-12-06	2025-12-05
Turn Table	CCS	CC-T-1F	N/A	N.C.R	N.C.R
Controller	CCS	CC-C-1F	N/A	N.C.R	N.C.R
Antenna Tower	CCS	CC-A-1F	N/A	N.C.R	N.C.R
Software	e3 V9-210616c				

Remark:

1. Each piece of equipment is scheduled for calibration once a year.
2. N.C.R. = No Calibration Required.

1.7 SUPPORT AND EUT ACCESSORIES EQUIPMENT

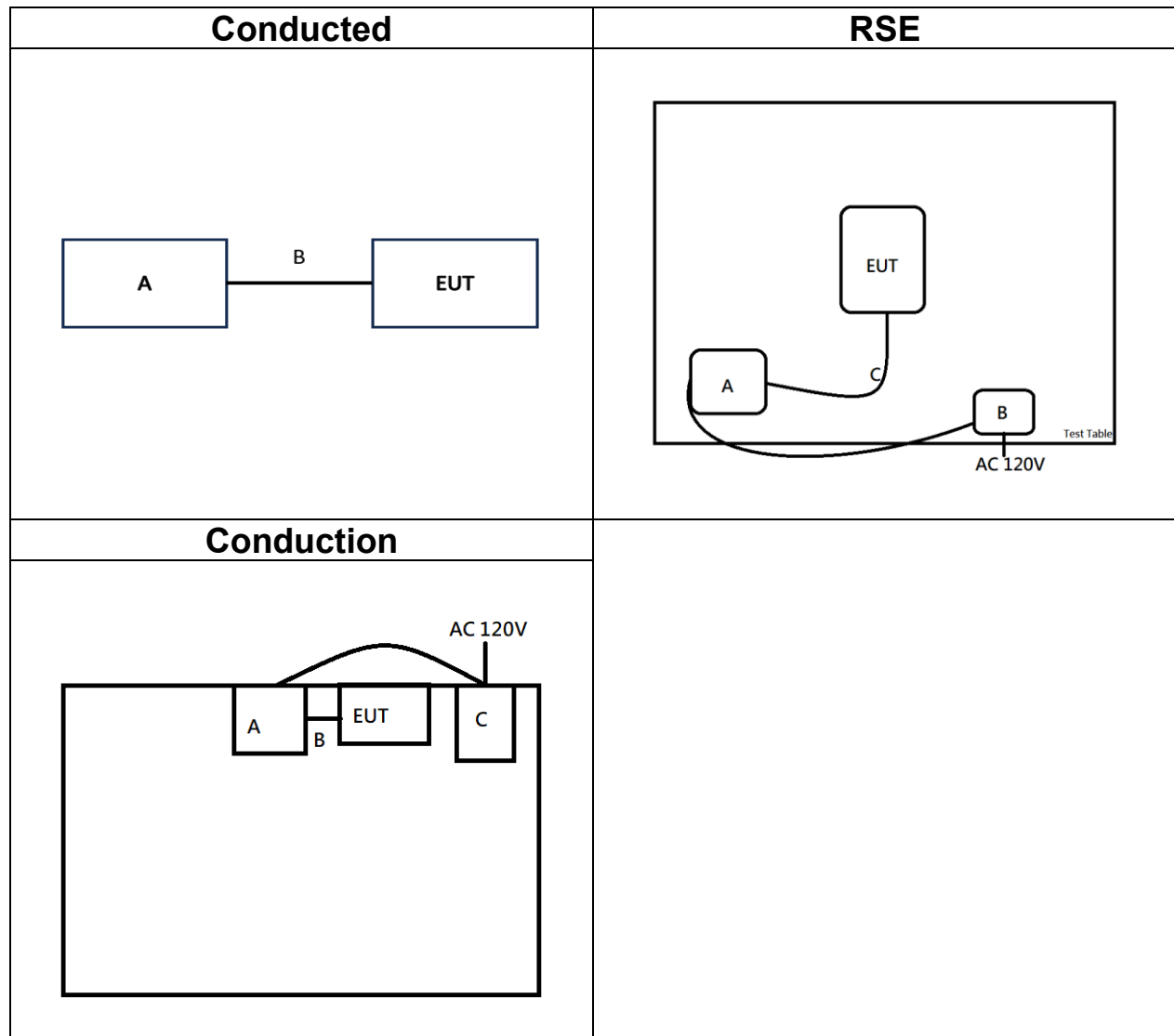
EUT Accessories Equipment						
No.	Equipment	Brand	Model	Series No.	FCC ID	IC
	N/A					

Support Equipment (Conducted)						
No.	Equipment	Brand	Model	Series No.	FCC ID	IC
A	NB	DELL	Latitude 5490	N/A	N/A	N/A
B	Type-C to Type-C Cable	CYP	N/A	N/A	N/A	N/A

Support Equipment (RSE)						
No.	Equipment	Brand	Model	Series No.	FCC ID	IC
A	NB	DELL	Latitude E5490	HXKSTN2	N/A	N/A
B	Adapter	DELL	LA90PM130	N/A	N/A	N/A
C	Type-C to Type-C Cable	CYP	N/A	N/A	N/A	N/A

Support Equipment (Conduction)						
No.	Equipment	Brand	Model	Series No.	FCC ID	IC
A	NB	DELL	Latitude 5490	N/A	N/A	N/A
B	Type-C to Type-C Cable	CYP	N/A	N/A	N/A	N/A
C	Adapter	DELL	LA90PM130	N/A	N/A	N/A

1.8 TEST SETUP DIAGRAM



1.9 TEST PROGRAM

The EUT connection corresponds to the surrounding fixture control board.
This EUT uses "QRCT4" software and to set the frequency, modulation, and power to allow the sample to continuously transmit (including frequency hopping mode).

1.10 TEST METHODOLOGY AND APPLIED STANDARDS

The test methodology, setups and results comply with all requirements in accordance with ANSI C63.10-2020, FCC Part 2, FCC Part 15.247, KDB 558074.

2. TEST SUMMARY

FCC Standard Section	Report Section	Test Item	Result
15.203	1.3	Antenna Requirement	Pass
15.207(a)	4.1	AC Conducted Emission	Pass
15.247(b)(3)	4.2	Output Power Measurement	Pass
15.247(d) 15.205	4.3	Radiation Band Edge	Pass
15.247(d) 15.209 15.205	4.3	Radiation Spurious Emission	Pass

Note:

The host antenna is of a different type than originally approved, RF output power was reduced compared to the original application, so conducted performance in the intended frequency bands is expected to be lower than measured in the original modular approval. However, radiation performance will be fully evaluated for product compliance.

3. DESCRIPTION OF TEST MODES

3.1 THE WORST MODE OF OPERATING CONDITION

Operation mode	BLE Mode (1Mbps) BLE Mode (2Mbps)
Test Channel Frequencies	1.Lowest Channel : 2402MHz 2.Middle Channel : 2440MHz 3.Highest Channel : 2480MHz

Remark:

1. EUT pre-scanned data rate of output power for each mode, the worst data rate were recorded in this report.

3.2 THE WORST MODE OF MEASUREMENT

AC Power Line Conduction Emission	
Test Condition	AC Power line conduction emission for line and neutral
Power supply Mode	Mode 1: EUT power by Host system
Worst Mode	☒ Mode 1 ☒ Mode 2 ☐ Mode 3 ☐ Mode 4

Radiated Emission Measurement Above 1G	
Test Condition	Radiated Emission Above 1G
Power supply Mode	Mode 1: EUT power by Host System
Worst Mode	☒ Mode 1 ☐ Mode 2 ☐ Mode 3 ☐ Mode 4
Worst Position	☐ Placed in fixed position. ☒ Placed in fixed position at X-Plane (E2-Plane) ☐ Placed in fixed position at Y-Plane (E1-Plane) ☐ Placed in fixed position at Z-Plane (H-Plane)

Radiated Emission Measurement Below 1G	
Test Condition	Radiated Emission Below 1G
Power supply Mode	Mode 1: EUT power by Host System
Worst Mode	☒ Mode 1 ☐ Mode 2 ☐ Mode 3 ☐ Mode 4

Remark:

1. The worst mode was record in this test report.
2. AC power line conducted emission were performed the EUT transmit at the highest output power channel as worse case.
3. EUT pre-scanned in three axis ,X,Y, Z and two polarity, for radiated measurement. The worst case(X-Plane) were recorded in this report

4. TEST RESULT

4.1 AC POWER LINE CONDUCTED EMISSION

4.1.1 Test Limit

According to §15.207(a),

Frequency Range (MHz)	Limits(dB μ V)	
	Quasi-peak	Average
0.15 to 0.50	66 to 56*	56 to 46*
0.50 to 5	56	46
5 to 30	60	50

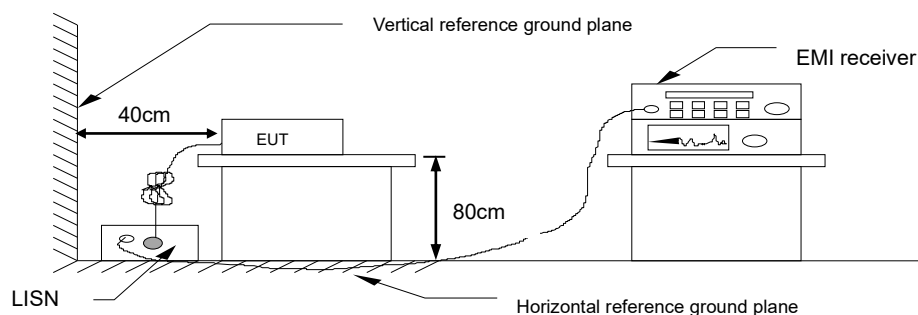
* Decreases with the logarithm of the frequency.

4.1.2 Test Procedure

Test method Refer as ANSI C63.10: 2013 clause 6.2,

1. The EUT was placed above horizontal ground plane and 0.4m above vertical ground plane
2. EUT connected to the line impedance stabilization network (LISN)
3. Receiver set RBW of 9kHz and Detector Peak, and note as quasi-peak and average.
4. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
5. Recorded Line for Neutral and Line.

4.1.3 Test Setup



4.1.4 Test Result

Pass.

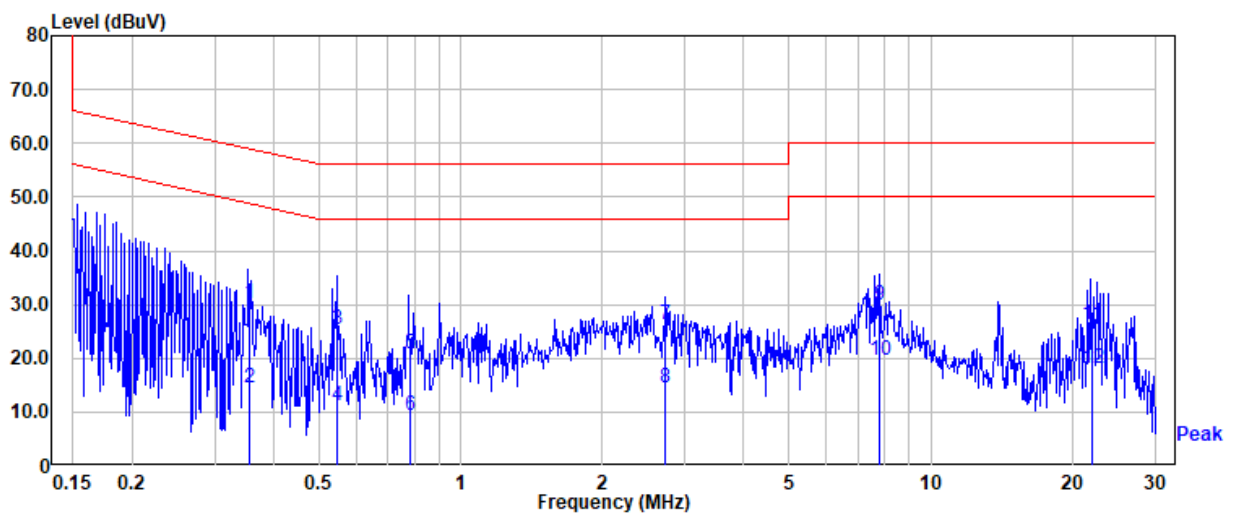
Project No: TM-2503000493P
Report No.: TMWK2503001448KR

Page 16 / 45
Rev. 00

Test Data

Project No : TM-2503000493P
Operation Band : BLE
Test Chamber : Conduction
Probe : Line
Note :

Test Date : 2025-06-27
Temp./Humi. : 25°C / 65%
Engineer : David.Li
Test Voltage : AC 120V/60Hz



Freq	Read	Factor	Actual	Limit	Margin	Detector
-----	-----	-----	-----	-----	-----	-----
MHz	dBuV	dB	dBuV	dBuV	dB	PK/QP/AV
0.355	30.26	0.06	30.32	58.84	-28.52	QP
0.355	14.52	0.06	14.58	48.84	-34.26	Average
0.545	25.33	0.06	25.39	56.00	-30.61	QP
0.545	11.02	0.06	11.08	46.00	-34.92	Average
0.780	20.81	0.08	20.89	56.00	-35.11	QP
0.780	9.19	0.08	9.27	46.00	-36.73	Average
2.723	26.21	0.12	26.33	56.00	-29.67	QP
2.723	14.42	0.12	14.54	46.00	-31.46	Average
7.765	29.59	0.21	29.80	60.00	-30.20	QP
7.765	19.45	0.21	19.66	50.00	-30.34	Average
22.004	25.87	0.36	26.23	60.00	-33.77	QP
22.004	17.69	0.36	18.05	50.00	-31.95	Average

Note: 1. Actual FS= Spectrum Read Level + Factor

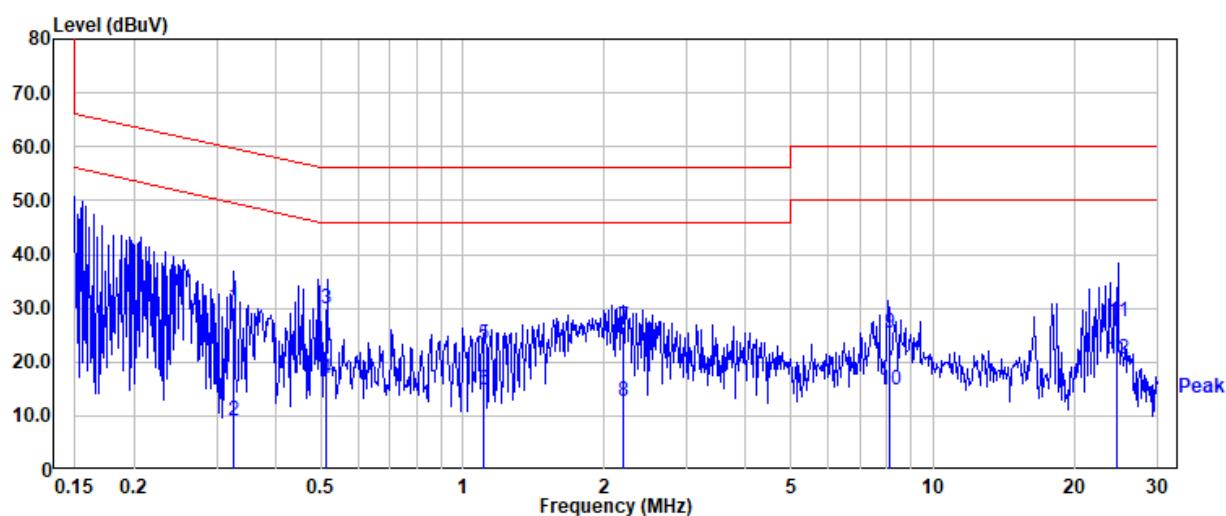
Note: 2. Margin= Actual FS – Limit

Project No: TM-2503000493P
Report No.: TMWK2503001448KR

Page 17 / 45
Rev. 00

Project No : TM-2503000493P
Operation Band : BLE
Test Chamber : Conduction
Probe : Neutral
Note :

Test Date : 2025-06-27
Temp./Humi. : 25°C / 65%
Engineer : David.Li
Test Voltage : AC 120V/60Hz



Freq	Read	Factor	Actual	Limit	Margin	Detector
-----	Level	-----	FS	-----	-----	Mode
MHz	dBuV	dB	dBuV	dBuV	dB	PK/QP/AV
0.327	30.15	0.09	30.24	59.52	-29.28	QP
0.327	9.01	0.09	9.10	49.52	-40.42	Average
0.514	29.93	0.08	30.01	56.00	-25.99	QP
0.514	16.72	0.08	16.80	46.00	-29.20	Average
1.114	23.24	0.10	23.34	56.00	-32.66	QP
1.114	14.79	0.10	14.89	46.00	-31.11	Average
2.192	26.47	0.13	26.60	56.00	-29.40	QP
2.192	12.69	0.13	12.82	46.00	-33.18	Average
8.088	25.00	0.22	25.22	60.00	-34.78	QP
8.088	14.51	0.22	14.73	50.00	-35.27	Average
24.700	27.10	0.37	27.47	60.00	-32.53	QP
24.700	20.16	0.37	20.53	50.00	-29.47	Average

Note: 1. Actual FS= Spectrum Read Level + Factor

Note: 2. Margin= Actual FS – Limit

4.2 OUTPUT POWER MEASUREMENT

4.2.1 Test Limit

According to §15.247(b)(3),

Peak output power :

FCC

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,

Limit	☒ Antenna not exceed 6 dBi : 30dBm ☐ Antenna with DG greater than 6 dBi [Limit = 30 – (DG – 6)] ☐ Point-to-point operation
-------	---

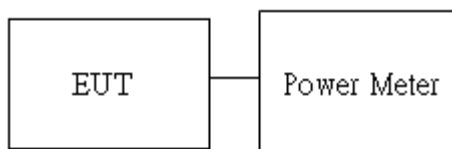
Average output power : For reporting purposes only.

4.2.2 Test Procedure

Test method Refer as ANSI C63.10:2013.

1. The EUT RF output connected to the power meter by RF cable.
2. Setting maximum power transmit of EUT.
3. The path loss was compensated to the results for each measurement.
4. Measure and record the result of Peak output power and Average output power. in the test report.

4.2.3 Test Setup



4.2.4 Test Result

Temperature: 22.9 ~ 23.8°C
Humidity: 60 ~ 61% RH

Test date: July 7 ~ 8, 2025
Tested by: Marco Chan

Peak & Average output power :

BLE 1M mode:

CH	Frequency (MHz)	Power Setting	Peak Output Power (dBm)	Required Limit (dBm)
0	2402	default	4.54	30
19	2440	default	5.62	30
39	2480	default	3.48	30
CH	Frequency (MHz)	Power Setting	Avg. Output Power (dBm)	Required Limit (dBm)
0	2402	default	4.30	30
19	2440	default	5.39	30
39	2480	default	3.20	30

***Note:**

1.Measured by power meter, cable loss 0.94 dB + Duty cycle factor has been offseted to the power meter for Avg. power and cable loss has been offseted for Peak power measurement.

BLE 2M mode:

CH	Frequency (MHz)	Power Setting	Peak Output Power (dBm)	Required Limit (dBm)
0	2402	default	4.72	30
19	2440	default	5.82	30
39	2480	default	3.64	30
CH	Frequency (MHz)	Power Setting	Avg. Output Power (dBm)	Required Limit (dBm)
0	2402	default	4.28	30
19	2440	default	5.38	30
39	2480	default	3.22	30

***Note:**

1.Measured by power meter, cable loss 0.94 dB + Duty cycle factor has been offseted to the power meter for Avg. power and cable loss has been offseted for Peak power measurement.

4.3 RADIATION BANDEDGE AND SPURIOUS EMISSION

4.3.1 Test Limit

FCC according to §15.247(d), §15.209 and §15.205,

In any 100 kHz bandwidth outside the authorized frequency band, all harmonic and spurious must be least 20 dB below the highest emission level with the authorized frequency band. Radiation emission which fall in the restricted bands must also follow the FCC section 15.209 as below limit in table.

Below 30 MHz

Frequency	Field Strength (microvolts/m)	Magnetic H-Field (microamperes/m)	Measurement Distance (metres)
9-490 kHz	2,400/F (F in kHz)	2,400/F (F in kHz)	300
490-1,705 kHz	24,000/F (F in kHz)	24,000/F (F in kHz)	30
1.705-30 MHz	30	N/A	30

Above 30 MHz

Frequency (MHz)	Field Strength microvolts/m at 3 metres (watts, e.i.r.p.)	
	Transmitters	Receivers
30-88	100 (3 nW)	100 (3 nW)
88-216	150 (6.8 nW)	150 (6.8 nW)
216-960	200 (12 nW)	200 (12 nW)
Above 960	500 (75 nW)	500 (75 nW)

Remark:

Although these tests were performed other than open area test site, adequate comparison measurements were confirmed against 30 m open area test site. Therefore sufficient tests were made to demonstrate that the alternative site produces results that correlate with the ones of tests made in an open field based on KDB 414788.

4.3.2 Test Procedure

1. The EUT is placed on a turntable, Above 1 GHz is 1.5m and below 1 GHz is 0.8m above ground plane. The EUT Configured un accordance with ANSI C63.10-2020, and the EUT set in a continuous mode.
2. The turntable shall be rotated for 360 degrees to determine the position of maximum emission level. And EUT is set 3m away from the receiving antenna, which is scanned from 1m to 4m above the ground plane to find out the highest emissions. Measurement are made polarized in both the vertical and the horizontal positions with antenna.
3. Span shall wide enough to full capture the emission measured. The SA from 9KHz to 26.5GHz set to the low, Mid and High channels with the EUT transmit.
4. No emission found between lowest internal used/generated frequency to 30MHz (9KHz~30MHz).

Radiated emission below 30MHz is measured in a 9m*6m*6m semi-ane choic chamber, the measurements correspond to those obtained at an open-field test site. There is a comparison data of both open-field test site and semi-Anechoic chamber, and the result came out very similar.

5. The SA setting following :

(1) Below 30MHz :

(1.1) 9KHz-490KHz : RBW=200Hz / VBW=1kHz / Sweep=AUTO

(1.2) 490KHz-30MHz : RBW=10kHz / VBW=30kHz / Sweep=AUTO

(2) 30MHz to 1GHz : RBW = 100kHz, VBW $\geq 3 \times$ RBW, Sweep = Auto,

Detector = Peak, Trace = Max hold.

(3) Above 1GHz :

(3.1) For Peak measurement : RBW = 1MHz, VBW $\geq 3 \times$ RBW, Sweep = Auto,

Detector = Peak, Trace = Max hold.

(3.2) For Average measurement : RBW = 1MHz, VBW

·If Duty Cycle $\geq 98\%$, VBW=10Hz.

·If Duty Cycle $< 98\%$, VBW=1/T.

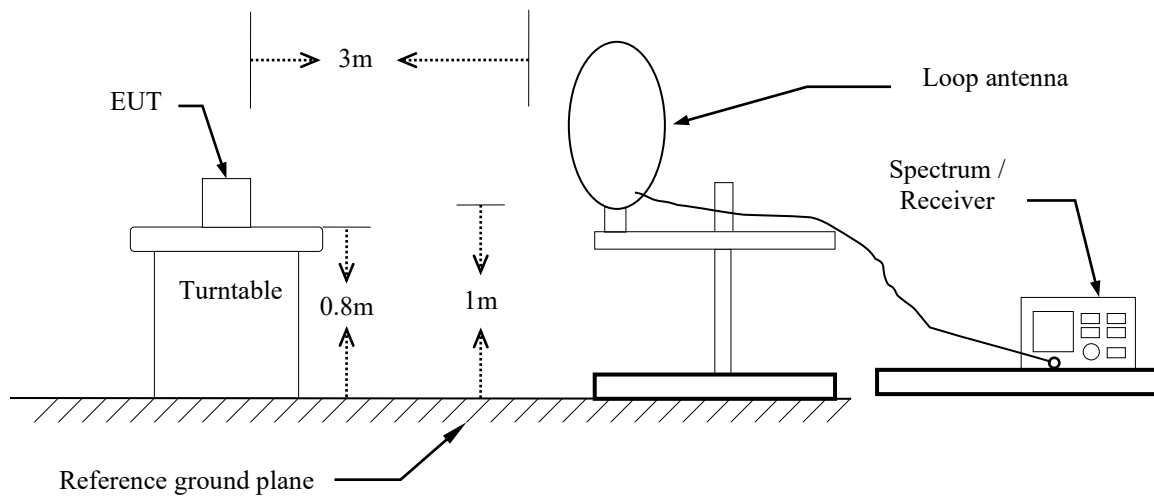
6. Data result :

Actual FS=Spectrum Reading Level + Factor

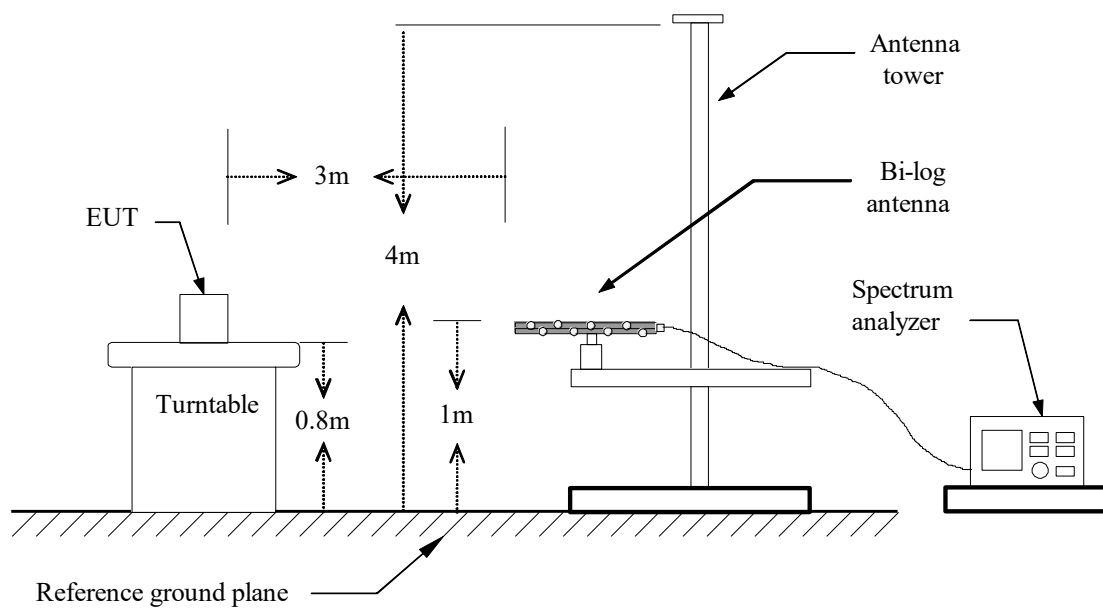
Margin=Actual FS- Limit

4.3.3 Test Setup

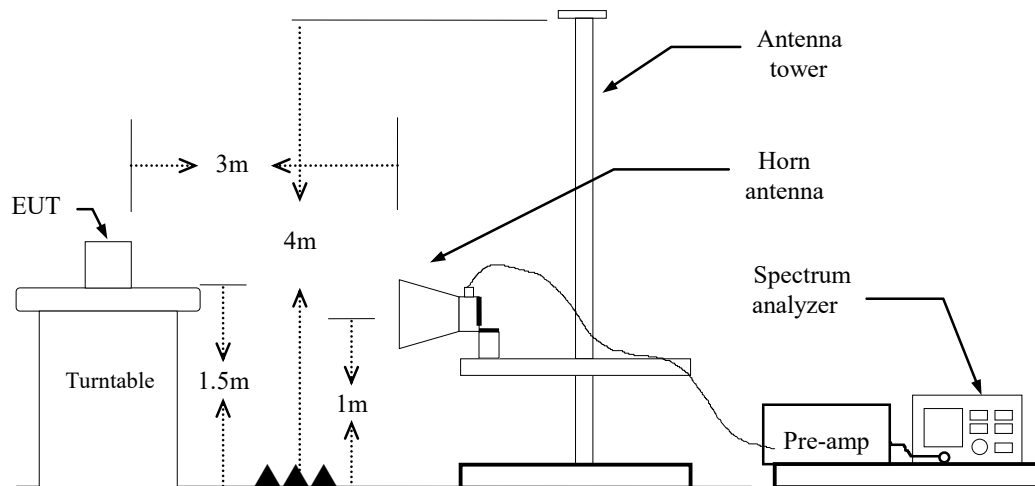
9kHz ~ 30MHz



30MHz ~ 1GHz



Above 1 GHz

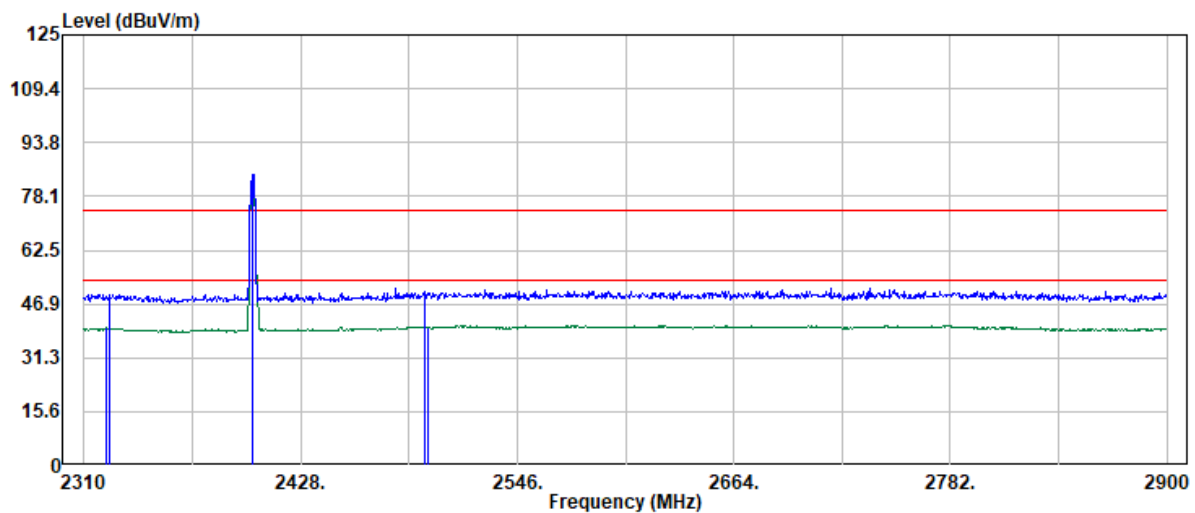


4.3.4 Test Result

Band Edge Test Data

Project No : TM-2503000493P
Operation Band : BLE_1M
Frequency : 2402 MHz
Operation Mode : Bandedge
EUT Pol : E2
Setting :

Test Date : 2025-07-04
Temp./Humi. : 25.6/56
Antenna Pol. : VERTICAL
Engineer : Tony.Chao
Test Chamber : 966A



Trace: 1

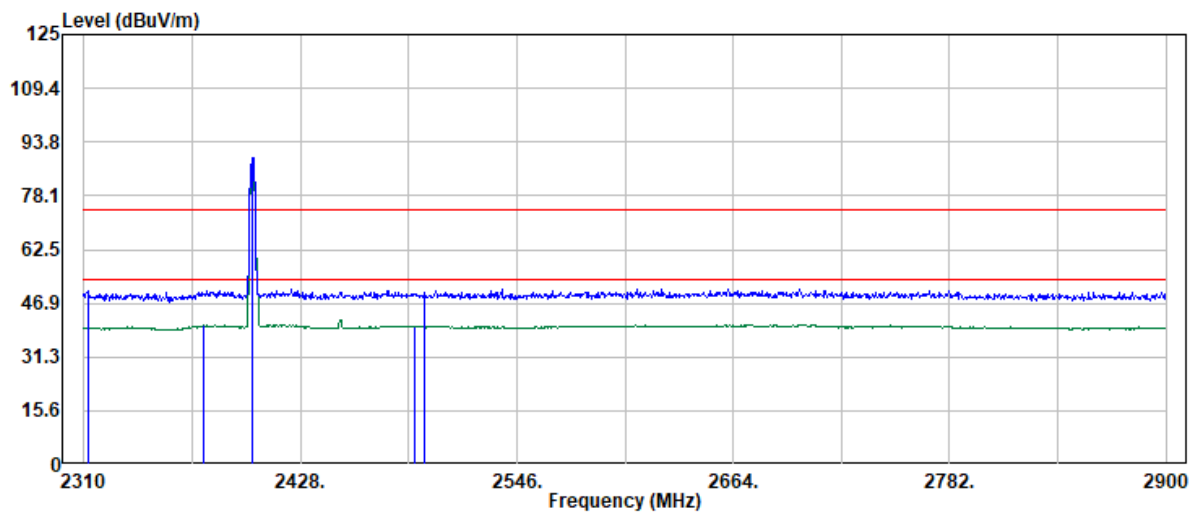
Freq	Read Level	Factor	Actual FS	Limit @3m	Margin	Detector Mode
-----	-----	-----	-----	-----	-----	-----
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	PK/QP/AV
2322.49	33.65	6.26	39.91	54.00	-14.09	Average
2323.49	43.39	6.26	49.65	74.00	-24.35	Peak
2402.00	78.10	6.38	84.48	--	--	Peak
2402.00	77.47	6.38	83.85	--	--	Average
2495.34	43.70	6.82	50.52	74.00	-23.48	Peak
2497.34	33.46	6.82	40.28	54.00	-13.72	Average

Project No: TM-2503000493P
Report No.: TMWK2503001448KR

Page 25 / 45
Rev. 00

Project No : TM-2503000493P
Operation Band : BLE_1M
Frequency : 2402 MHz
Operation Mode : Bandedge
EUT Pol : E2
Setting :

Test Date : 2025-07-04
Temp./Humi. : 25.6/56
Antenna Pol. : HORIZONTAL
Engineer : Tony.Chao
Test Chamber : 966A



Trace: 1

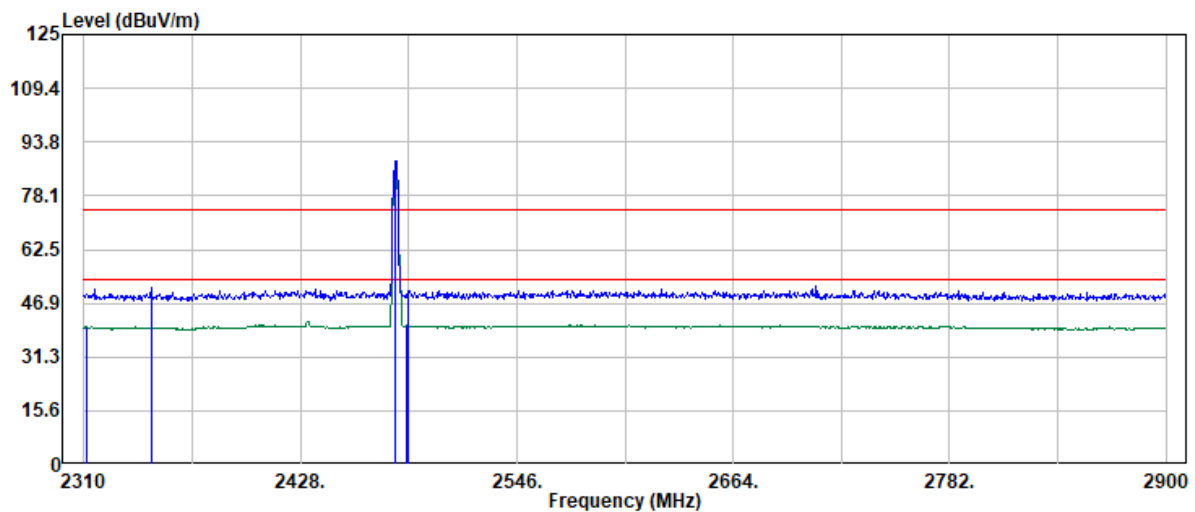
Freq	Read Level	Factor	Actual FS	Limit @3m	Margin	Detector Mode
-----	-----	-----	-----	-----	-----	-----
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	PK/QP/AV
2312.00	44.18	6.37	50.55	74.00	-23.45	Peak
2375.45	34.19	6.23	40.42	54.00	-13.58	Average
2402.00	82.88	6.38	89.26	--	--	Peak
2402.00	82.28	6.38	88.66	--	--	Average
2490.35	33.41	6.82	40.23	54.00	-13.77	Average
2495.84	43.26	6.82	50.08	74.00	-23.92	Peak

Project No: TM-2503000493P
Report No.: TMWK2503001448KR

Page 26 / 45
Rev. 00

Project No : TM-2503000493P
Operation Band : BLE_1M
Frequency : 2480 MHz
Operation Mode : Bandedge
EUT Pol : E2
Setting :

Test Date : 2025-07-04
Temp./Humi. : 25.6/56
Antenna Pol. : VERTICAL
Engineer : Tony.Chao
Test Chamber : 966A



Trace: 1

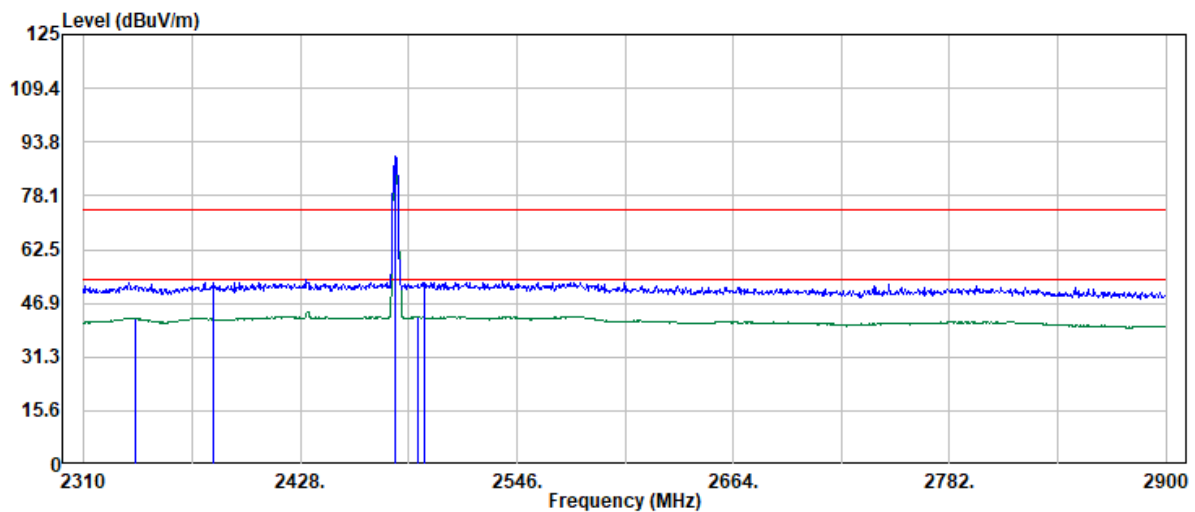
Freq	Read Level	Factor	Actual FS	Limit @3m	Margin	Detector Mode
-----	-----	-----	-----	-----	-----	-----
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	PK/QP/AV
2311.50	33.65	6.38	40.03	54.00	-13.97	Average
2346.47	45.44	6.13	51.57	74.00	-22.43	Peak
2480.00	81.55	6.73	88.28	--	--	Peak
2480.00	80.82	6.73	87.55	--	--	Average
2486.35	33.58	6.79	40.37	54.00	-13.63	Average
2486.85	43.78	6.80	50.58	74.00	-23.42	Peak

Project No: TM-2503000493P
Report No.: TMWK2503001448KR

Page 27 / 45
Rev. 00

Project No : TM-2503000493P
Operation Band : BLE_1M
Frequency : 2480 MHz
Operation Mode : Bandedge
EUT Pol : E2
Setting :

Test Date : 2025-07-04
Temp./Humi. : 25.6/56
Antenna Pol. : HORIZONTAL
Engineer : Tony.Chao
Test Chamber : 966A



Trace: 1

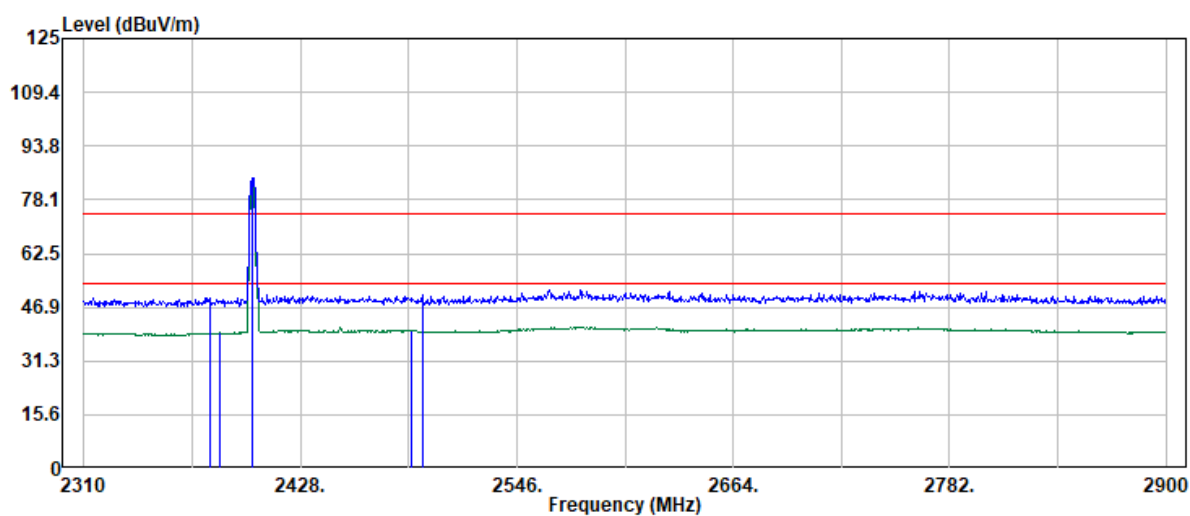
Freq	Read Level	Factor	Actual FS	Limit @3m	Margin	Detector Mode
-----	-----	-----	-----	-----	-----	-----
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	PK/QP/AV
2338.48	36.42	6.21	42.63	54.00	-11.37	Average
2380.94	46.72	6.27	52.99	74.00	-21.01	Peak
2480.00	82.86	6.73	89.59	--	--	Peak
2480.00	82.11	6.73	88.84	--	--	Average
2491.85	36.12	6.82	42.94	54.00	-11.06	Average
2495.34	46.06	6.82	52.88	74.00	-21.12	Peak

Project No: TM-2503000493P
Report No.: TMWK2503001448KR

Page 28 / 45
Rev. 00

Project No : TM-2503000493P
Operation Band : BLE_2M
Frequency : 2402 MHz
Operation Mode : Bandedge
EUT Pol : E2
Setting :

Test Date : 2025-07-04
Temp./Humi. : 25.6/56
Antenna Pol. : VERTICAL
Engineer : Tony.Chao
Test Chamber : 966A



Trace: 1

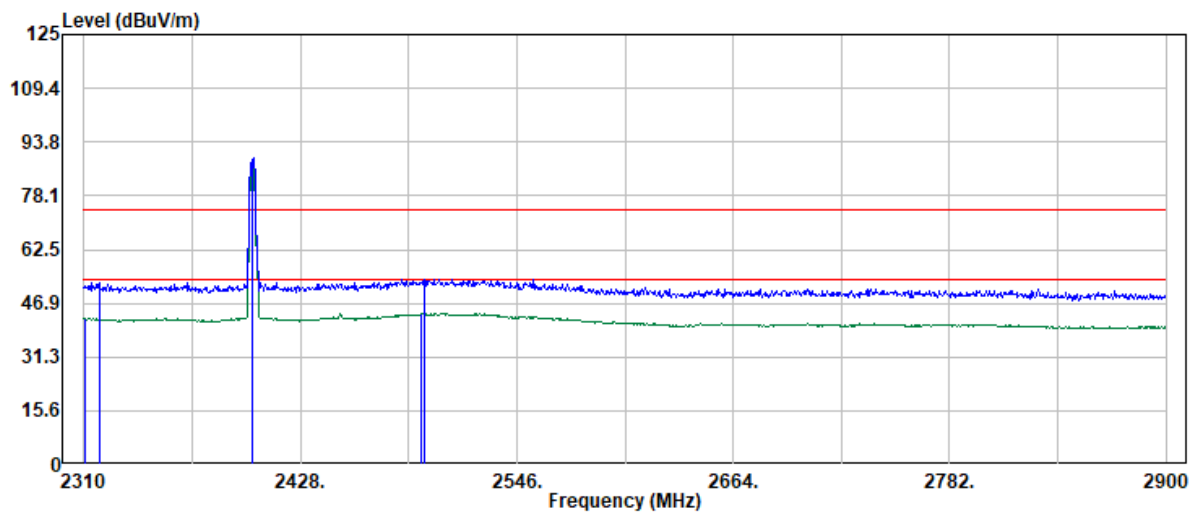
Freq	Read Level	Factor	Actual FS	Limit @3m	Margin	Detector Mode
-----	-----	-----	-----	-----	-----	-----
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	PK/QP/AV
2378.94	43.20	6.25	49.45	74.00	-24.55	Peak
2384.44	33.14	6.29	39.43	54.00	-14.57	Average
2402.00	78.22	6.38	84.60	--	--	Peak
2402.00	75.74	6.38	82.12	--	--	Average
2488.85	33.40	6.81	40.21	54.00	-13.79	Average
2494.34	43.59	6.81	50.40	74.00	-23.60	Peak

Project No: TM-2503000493P
Report No.: TMWK2503001448KR

Page 29 / 45
Rev. 00

Project No : TM-2503000493P
Operation Band : BLE_2M
Frequency : 2402 MHz
Operation Mode : Bandedge
EUT Pol : E2
Setting :

Test Date : 2025-07-04
Temp./Humi. : 25.6/56
Antenna Pol. : HORIZONTAL
Engineer : Tony.Chao
Test Chamber : 966A



Trace: 1

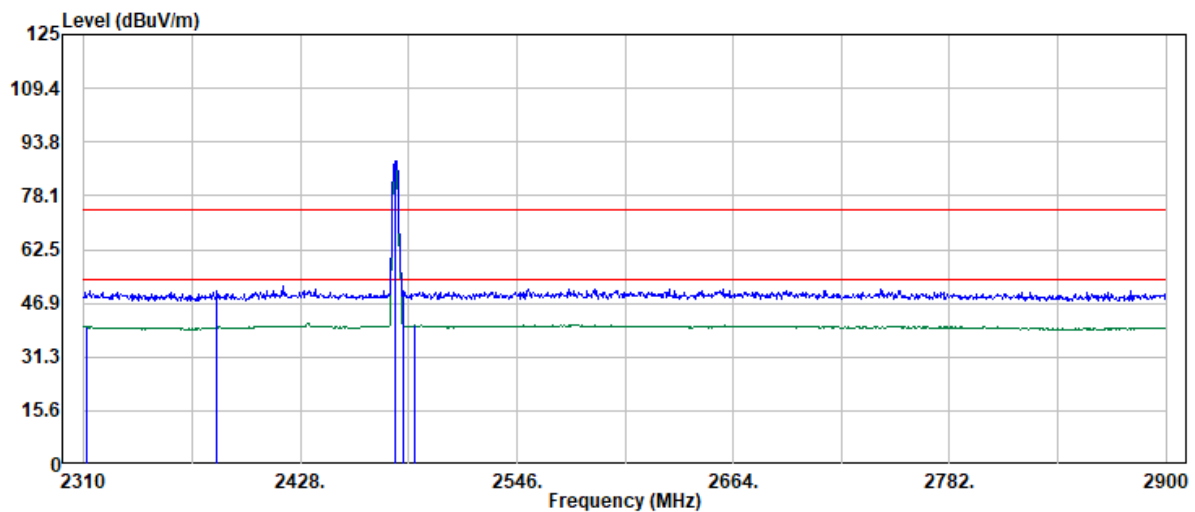
Freq	Read Level	Factor	Actual FS	Limit @3m	Margin	Detector Mode
-----	-----	-----	-----	-----	-----	-----
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	PK/QP/AV
2310.50	35.99	6.39	42.38	54.00	-11.62	Average
2318.49	46.62	6.29	52.91	74.00	-21.09	Peak
2402.00	82.56	6.38	88.94	--	--	Peak
2402.00	80.07	6.38	86.45	--	--	Average
2493.84	36.91	6.81	43.72	54.00	-10.28	Average
2495.84	46.82	6.82	53.64	74.00	-20.36	Peak

Project No: TM-2503000493P
Report No.: TMWK2503001448KR

Page 30 / 45
Rev. 00

Project No : TM-2503000493P
Operation Band : BLE_2M
Frequency : 2480 MHz
Operation Mode : Bandedge
EUT Pol : E2
Setting :

Test Date : 2025-07-04
Temp./Humi. : 25.6/56
Antenna Pol. : VERTICAL
Engineer : Tony.Chao
Test Chamber : 966A



Trace: 1

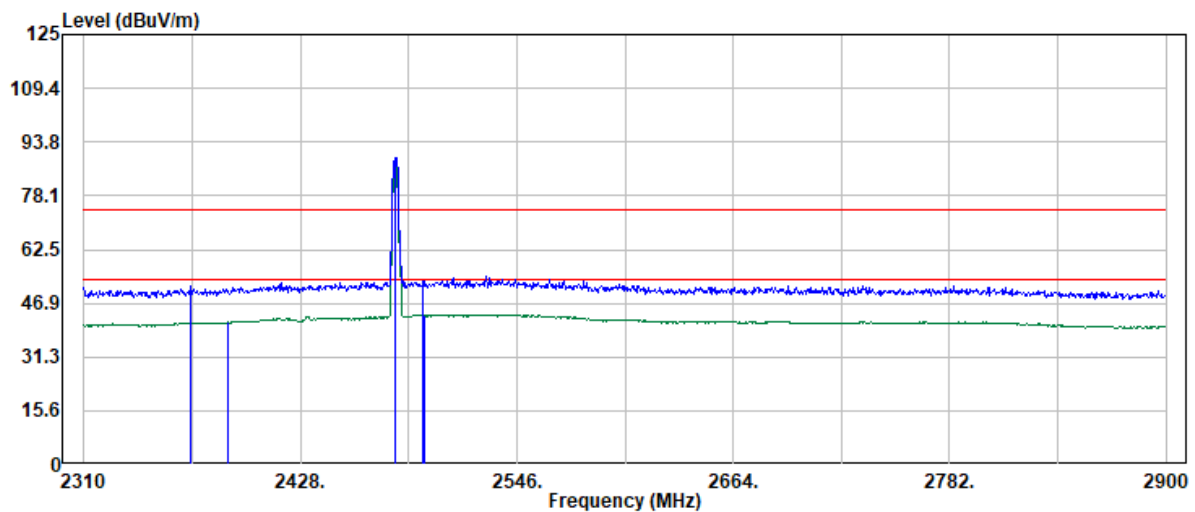
Freq	Read Level	Factor	Actual FS	Limit @3m	Margin	Detector Mode
-----	-----	-----	-----	-----	-----	-----
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	PK/QP/AV
2311.50	33.63	6.38	40.01	54.00	-13.99	Average
2382.44	44.40	6.28	50.68	74.00	-23.32	Peak
2480.00	81.65	6.73	88.38	--	--	Peak
2480.00	79.08	6.73	85.81	--	--	Average
2484.35	43.64	6.76	50.40	74.00	-23.60	Peak
2490.35	33.52	6.82	40.34	54.00	-13.66	Average

Project No: TM-2503000493P
Report No.: TMWK2503001448KR

Page 31 / 45
Rev. 00

Project No : TM-2503000493P
Operation Band : BLE_2M
Frequency : 2480 MHz
Operation Mode : Bandedge
EUT Pol : E2
Setting :

Test Date : 2025-07-04
Temp./Humi. : 25.6/56
Antenna Pol. : HORIZONTAL
Engineer : Tony.Chao
Test Chamber : 966A



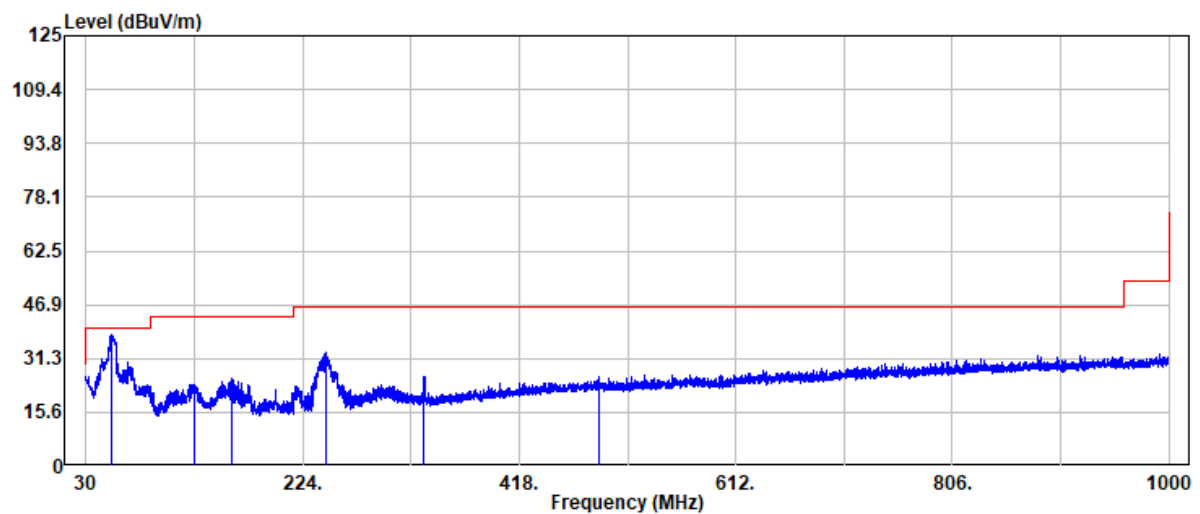
Trace: 1

Freq	Read Level	Factor	Actual FS	Limit @3m	Margin	Detector Mode
-----	-----	-----	-----	-----	-----	-----
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	PK/QP/AV
2367.95	45.72	6.18	51.90	74.00	-22.10	Peak
2388.93	35.05	6.32	41.37	54.00	-12.63	Average
2480.00	82.54	6.73	89.27	--	--	Peak
2480.00	79.93	6.73	86.66	--	--	Average
2494.84	46.61	6.81	53.42	74.00	-20.58	Peak
2495.34	36.59	6.82	43.41	54.00	-10.59	Average

TX Test Data

Project No : TM-2503000493P
Operation Band : BLE_2M
Frequency : 2402 MHz
Operation Mode : TX
EUT Pol : E2
Setting :

Test Date : 2025-07-05
Temp./Humi. : 25.2/54
Antenna Pol. : VERTICAL
Engineer : Tony.Chao
Test Chamber : 966A



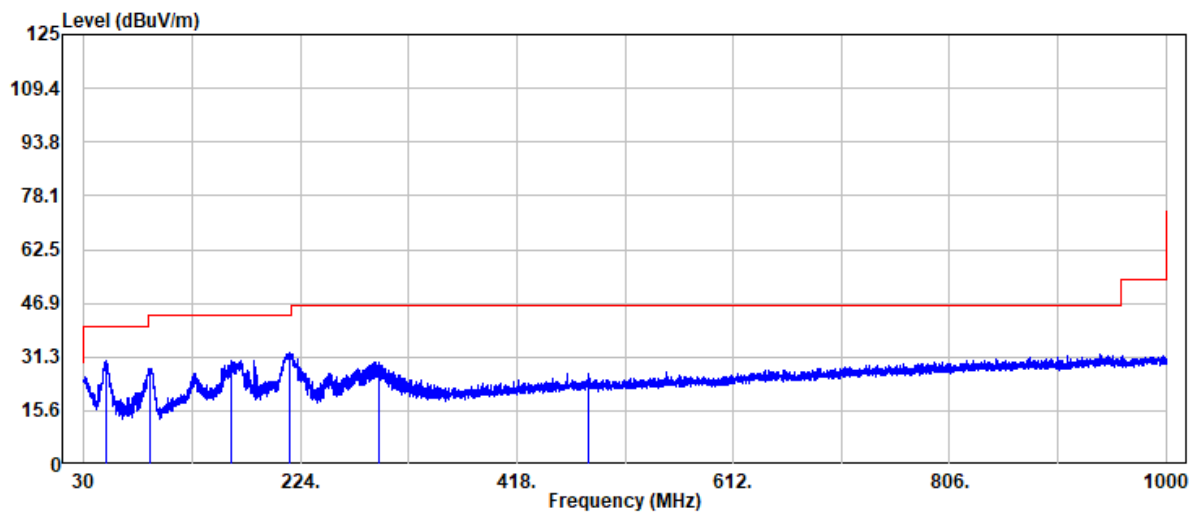
Freq	Read Level	Factor	Actual FS	Limit @3m	Margin	Detector Mode
-----	-----	-----	-----	-----	-----	-----
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	PK/QP/AV
52.67	54.51	-16.27	38.24	40.00	-1.76	Peak
127.24	33.37	-9.66	23.71	43.50	-19.79	Peak
161.07	36.59	-11.13	25.46	43.50	-18.04	Peak
245.10	44.29	-11.26	33.03	46.00	-12.97	Peak
333.00	34.89	-8.78	26.11	46.00	-19.89	Peak
488.81	30.14	-4.42	25.72	46.00	-20.28	Peak

Project No: TM-2503000493P
Report No.: TMWK2503001448KR

Page 33 / 45
Rev. 00

Project No : TM-2503000493P
Operation Band : BLE_2M
Frequency : 2402 MHz
Operation Mode : TX
EUT Pol : E2
Setting :

Test Date : 2025-07-05
Temp./Humi. : 25.2/54
Antenna Pol. : HORIZONTAL
Engineer : Tony.Chao
Test Chamber : 966A



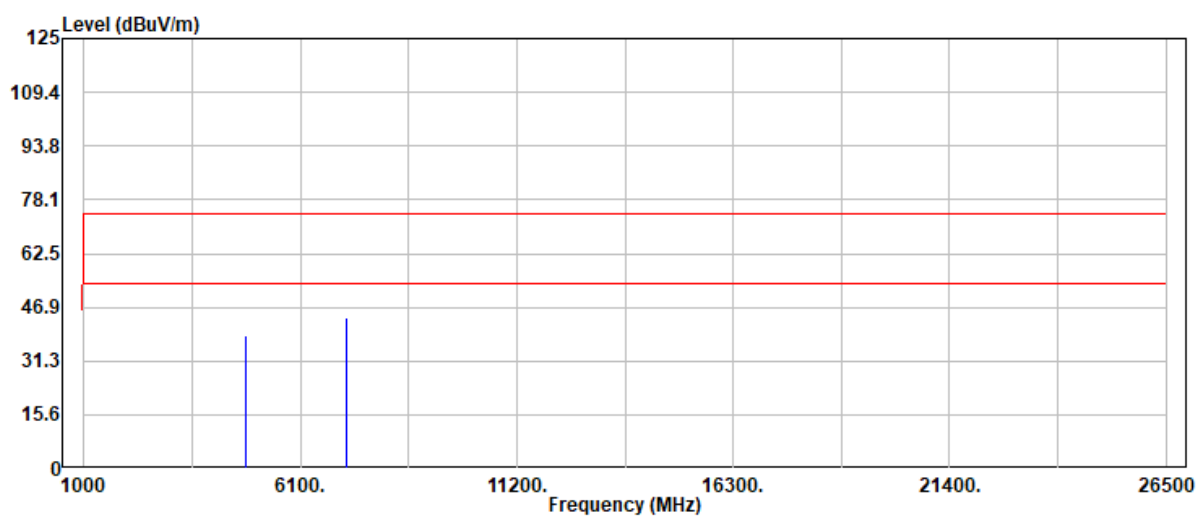
Freq	Read Level	Factor	Actual FS	Limit @3m	Margin	Detector Mode
-----	-----	-----	-----	-----	-----	-----
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	PK/QP/AV
50.13	46.13	-15.89	30.24	40.00	-9.76	Peak
89.90	44.04	-16.02	28.02	43.50	-15.48	Peak
162.65	41.51	-11.23	30.28	43.50	-13.22	Peak
214.54	44.92	-12.56	32.36	43.50	-11.14	Peak
293.96	39.33	-9.42	29.91	46.00	-16.09	Peak
482.87	30.70	-4.46	26.24	46.00	-19.76	Peak

Project No: TM-2503000493P
Report No.: TMWK2503001448KR

Page 34 / 45
Rev. 00

Project No : TM-2503000493P
Operation Band : BLE_1M
Frequency : 2402 MHz
Operation Mode : TX
EUT Pol : E2
Setting :

Test Date : 2025-07-04
Temp./Humi. : 25.6/56
Antenna Pol. : VERTICAL
Engineer : Tony.Chao
Test Chamber : 966A



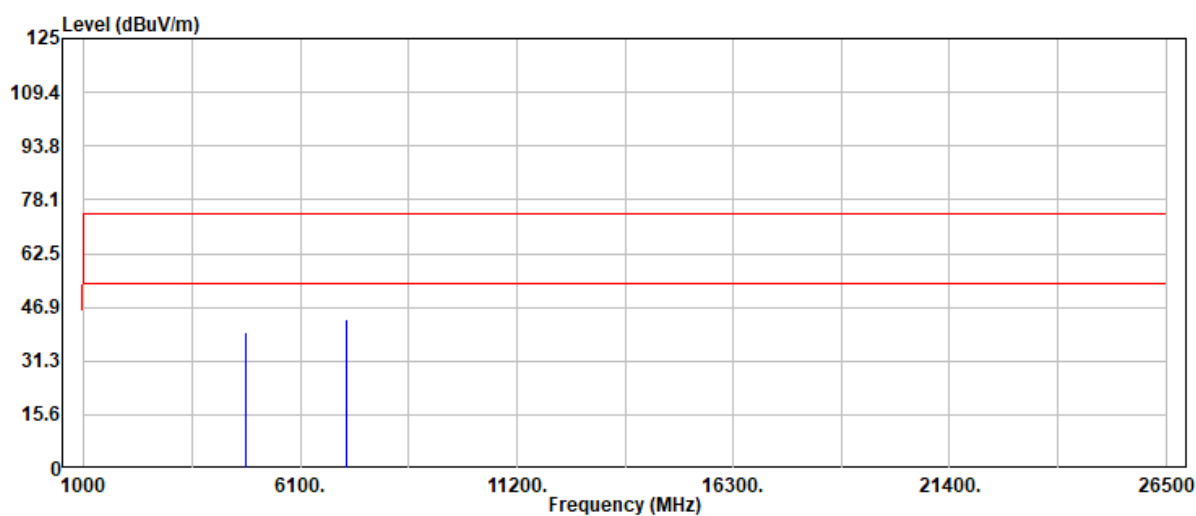
Freq	Read Level	Factor	Actual FS	Limit @3m	Margin	Detector Mode
-----	-----	-----	-----	-----	-----	-----
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	PK/QP/AV
4804.00	36.12	2.40	38.52	74.00	-35.48	Peak
4804.00	28.13	2.40	30.53	54.00	-23.47	Average
7206.00	34.76	8.96	43.72	74.00	-30.28	Peak
7206.00	26.74	8.96	35.70	54.00	-18.30	Average

Project No: TM-2503000493P
Report No.: TMWK2503001448KR

Page 35 / 45
Rev. 00

Project No : TM-2503000493P
Operation Band : BLE_1M
Frequency : 2402 MHz
Operation Mode : TX
EUT Pol : E2
Setting :

Test Date : 2025-07-04
Temp./Humi. : 25.6/56
Antenna Pol. : HORIZONTAL
Engineer : Tony.Chao
Test Chamber : 966A



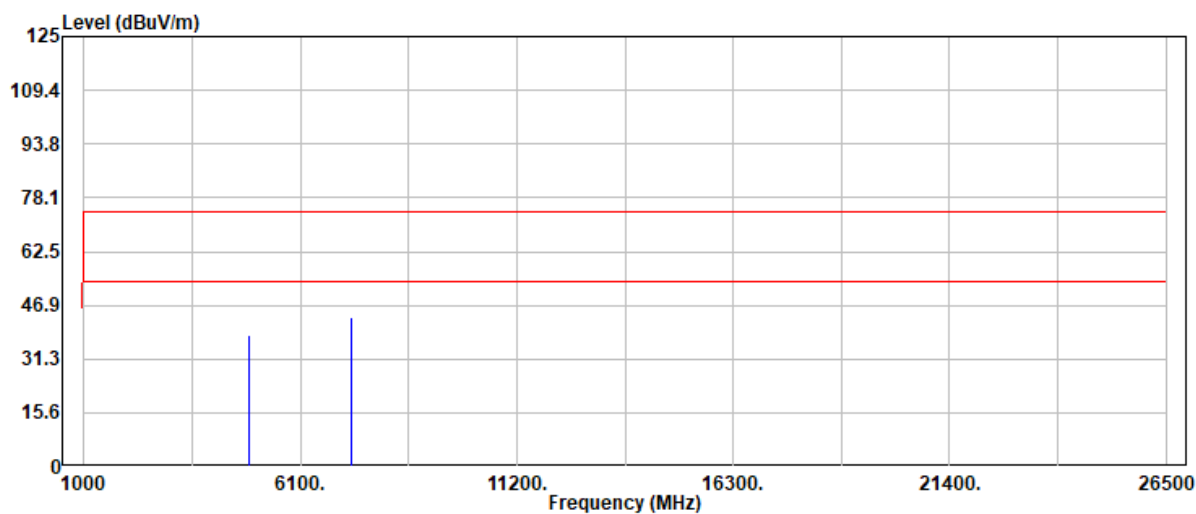
Freq	Read Level	Factor	Actual FS	Limit @3m	Margin	Detector Mode
-----	-----	-----	-----	-----	-----	-----
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	PK/QP/AV
4804.00	37.27	2.40	39.67	74.00	-34.33	Peak
4804.00	27.49	2.40	29.89	54.00	-24.11	Average
7206.00	34.53	8.96	43.49	74.00	-30.51	Peak
7206.00	26.32	8.96	35.28	54.00	-18.72	Average

Project No: TM-2503000493P
Report No.: TMWK2503001448KR

Page 36 / 45
Rev. 00

Project No : TM-2503000493P
Operation Band : BLE_1M
Frequency : 2440 MHz
Operation Mode : TX
EUT Pol : E2
Setting :

Test Date : 2025-07-04
Temp./Humi. : 25.6/56
Antenna Pol. : VERTICAL
Engineer : Tony.Chao
Test Chamber : 966A



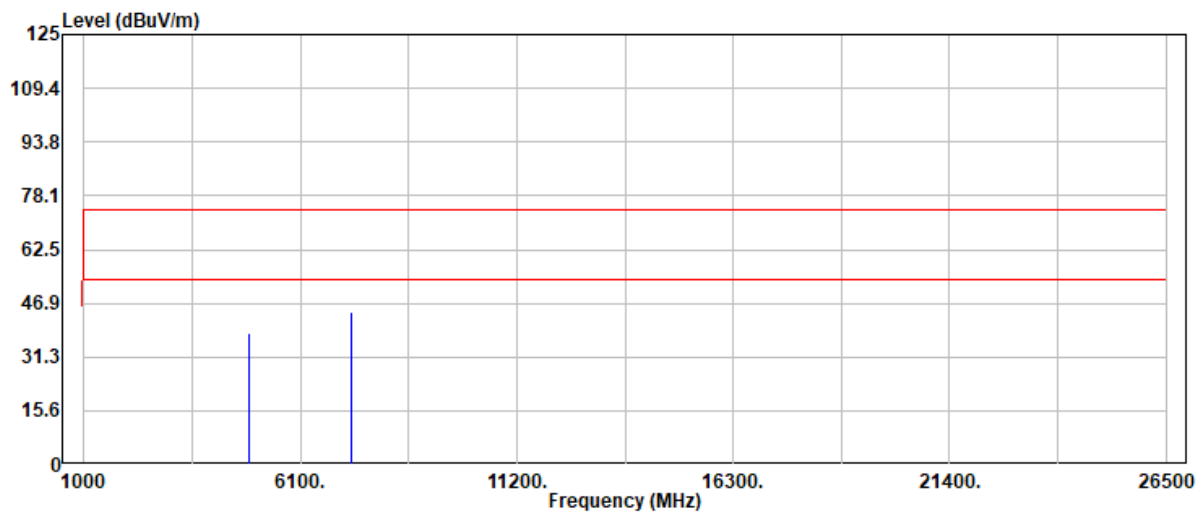
Freq	Read Level	Factor	Actual FS	Limit @3m	Margin	Detector Mode
-----	-----	-----	-----	-----	-----	-----
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	PK/QP/AV
4880.00	35.50	2.67	38.17	74.00	-35.83	Peak
4880.00	27.42	2.67	30.09	54.00	-23.91	Average
7320.00	33.94	9.36	43.30	74.00	-30.70	Peak
7320.00	26.37	9.36	35.73	54.00	-18.27	Average

Project No: TM-2503000493P
Report No.: TMWK2503001448KR

Page 37 / 45
Rev. 00

Project No : TM-2503000493P
Operation Band : BLE_1M
Frequency : 2440 MHz
Operation Mode : TX
EUT Pol : E2
Setting :

Test Date : 2025-07-04
Temp./Humi. : 25.6/56
Antenna Pol. : HORIZONTAL
Engineer : Tony.Chao
Test Chamber : 966A



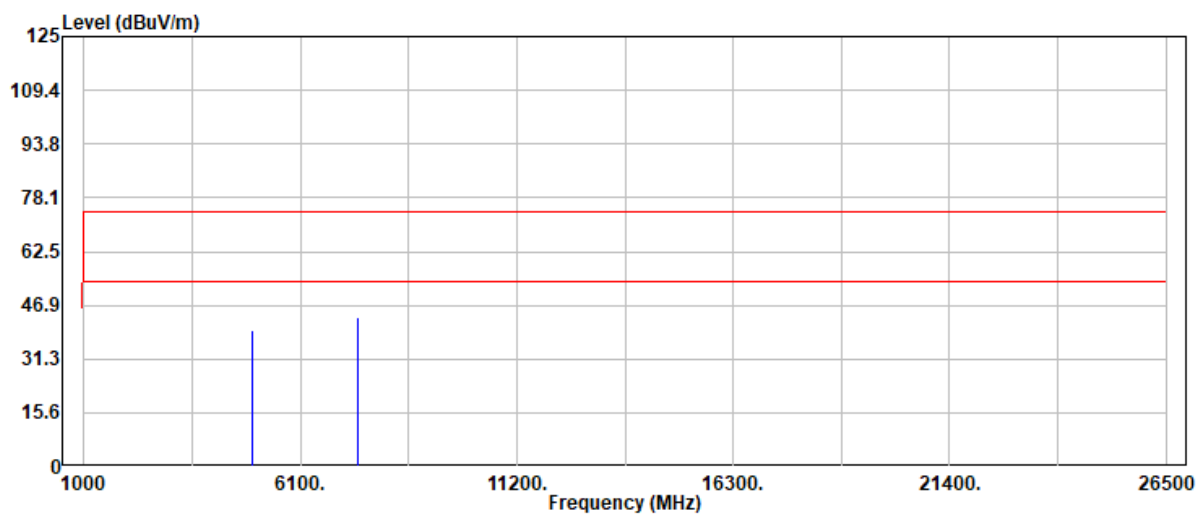
Freq	Read Level	Factor	Actual FS	Limit @3m	Margin	Detector Mode
-----	-----	-----	-----	-----	-----	-----
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	PK/QP/AV
4880.00	35.31	2.67	37.98	74.00	-36.02	Peak
4880.00	27.24	2.67	29.91	54.00	-24.09	Average
7320.00	34.93	9.36	44.29	74.00	-29.71	Peak
7320.00	26.43	9.36	35.79	54.00	-18.21	Average

Project No: TM-2503000493P
Report No.: TMWK2503001448KR

Page 38 / 45
Rev. 00

Project No : TM-2503000493P
Operation Band : BLE_1M
Frequency : 2480 MHz
Operation Mode : TX
EUT Pol : E2
Setting :

Test Date : 2025-07-04
Temp./Humi. : 25.6/56
Antenna Pol. : VERTICAL
Engineer : Tony.Chao
Test Chamber : 966A



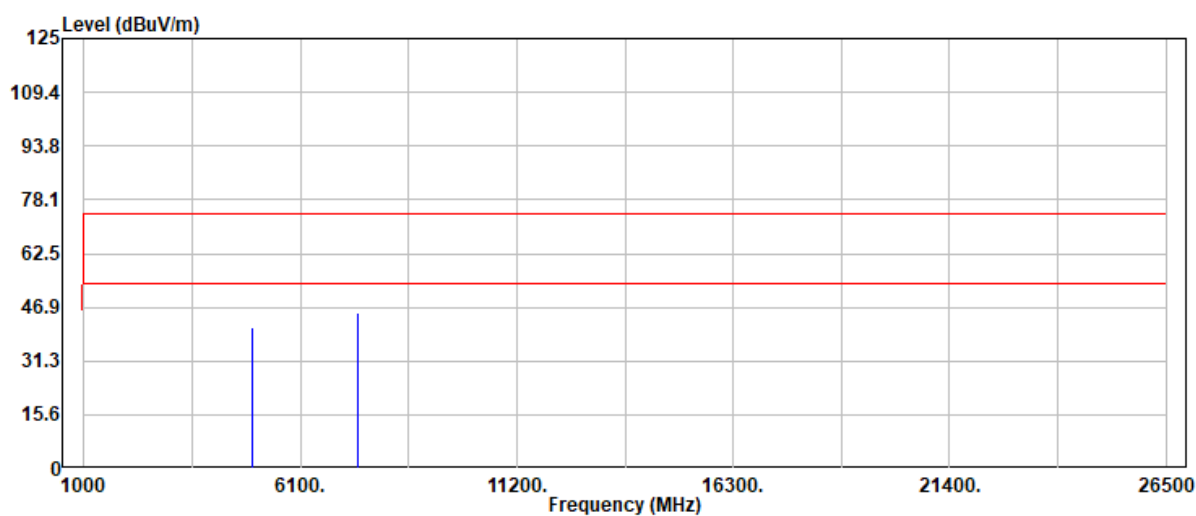
Freq	Read Level	Factor	Actual FS	Limit @3m	Margin	Detector Mode
-----	-----	-----	-----	-----	-----	-----
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	PK/QP/AV
4960.00	35.95	3.52	39.47	74.00	-34.53	Peak
4960.00	27.47	3.52	30.99	54.00	-23.01	Average
7440.00	33.74	9.46	43.20	74.00	-30.80	Peak
7440.00	26.39	9.46	35.85	54.00	-18.15	Average

Project No: TM-2503000493P
Report No.: TMWK2503001448KR

Page 39 / 45
Rev. 00

Project No : TM-2503000493P
Operation Band : BLE_1M
Frequency : 2480 MHz
Operation Mode : TX
EUT Pol : E2
Setting :

Test Date : 2025-07-04
Temp./Humi. : 25.6/56
Antenna Pol. : HORIZONTAL
Engineer : Tony.Chao
Test Chamber : 966A



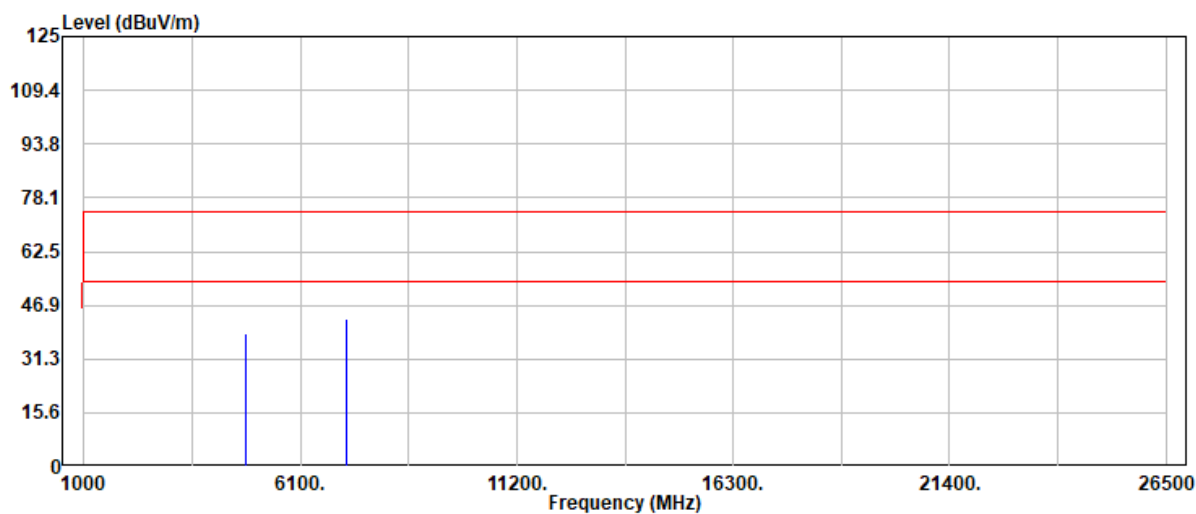
Freq	Read Level	Factor	Actual FS	Limit @3m	Margin	Detector Mode
-----	-----	-----	-----	-----	-----	-----
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	PK/QP/AV
4960.00	37.33	3.52	40.85	74.00	-33.15	Peak
4960.00	27.30	3.52	30.82	54.00	-23.18	Average
7440.00	35.74	9.46	45.20	74.00	-28.80	Peak
7440.00	26.33	9.46	35.79	54.00	-18.21	Average

Project No: TM-2503000493P
Report No.: TMWK2503001448KR

Page 40 / 45
Rev. 00

Project No : TM-2503000493P
Operation Band : BLE_2M
Frequency : 2402 MHz
Operation Mode : TX
EUT Pol : E2
Setting :

Test Date : 2025-07-04
Temp./Humi. : 25.6/56
Antenna Pol. : VERTICAL
Engineer : Tony.Chao
Test Chamber : 966A



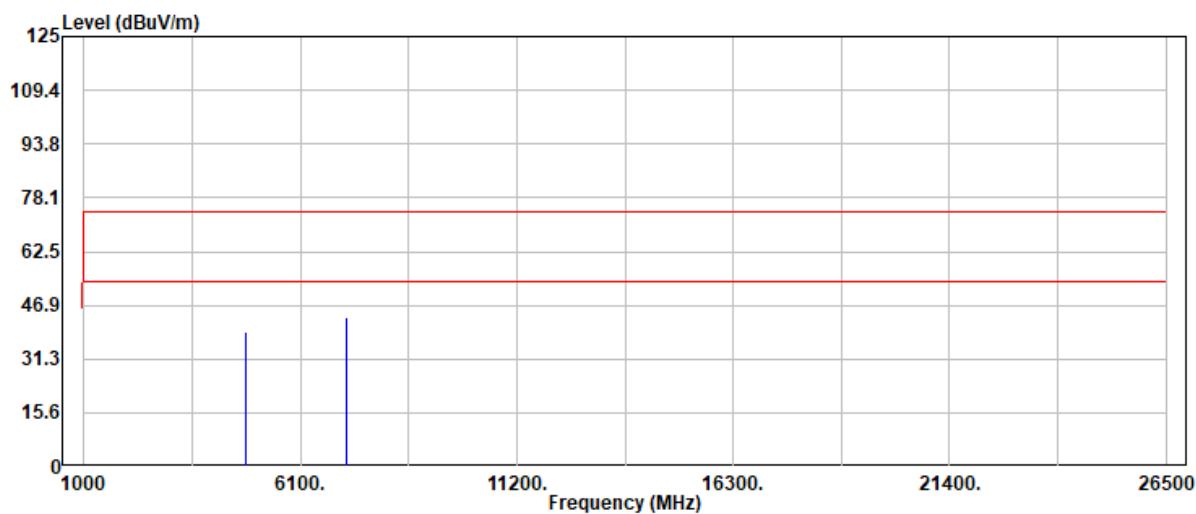
Freq	Read Level	Factor	Actual FS	Limit @3m	Margin	Detector Mode
-----	-----	-----	-----	-----	-----	-----
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	PK/QP/AV
4804.00	36.23	2.40	38.63	74.00	-35.37	Peak
4804.00	28.63	2.40	31.03	54.00	-22.97	Average
7206.00	33.79	8.96	42.75	74.00	-31.25	Peak
7206.00	26.54	8.96	35.50	54.00	-18.50	Average

Project No: TM-2503000493P
Report No.: TMWK2503001448KR

Page 41 / 45
Rev. 00

Project No : TM-2503000493P
Operation Band : BLE_2M
Frequency : 2402 MHz
Operation Mode : TX
EUT Pol : E2
Setting :

Test Date : 2025-07-04
Temp./Humi. : 25.6/56
Antenna Pol. : HORIZONTAL
Engineer : Tony.Chao
Test Chamber : 966A



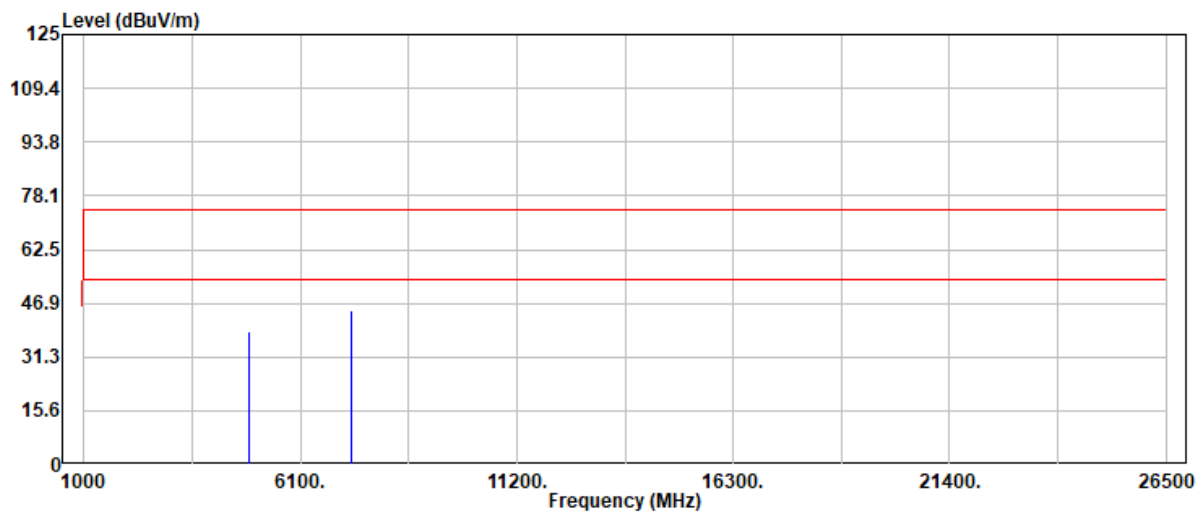
Freq	Read Level	Factor	Actual FS	Limit @3m	Margin	Detector Mode
-----	-----	-----	-----	-----	-----	-----
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	PK/QP/AV
4804.00	36.64	2.40	39.04	74.00	-34.96	Peak
4804.00	27.86	2.40	30.26	54.00	-23.74	Average
7206.00	34.57	8.96	43.53	74.00	-30.47	Peak
7206.00	26.74	8.96	35.70	54.00	-18.30	Average

Project No: TM-2503000493P
Report No.: TMWK2503001448KR

Page 42 / 45
Rev. 00

Project No : TM-2503000493P
Operation Band : BLE_2M
Frequency : 2440 MHz
Operation Mode : TX
EUT Pol : E2
Setting :

Test Date : 2025-07-04
Temp./Humi. : 25.6/56
Antenna Pol. : VERTICAL
Engineer : Tony.Chao
Test Chamber : 966A



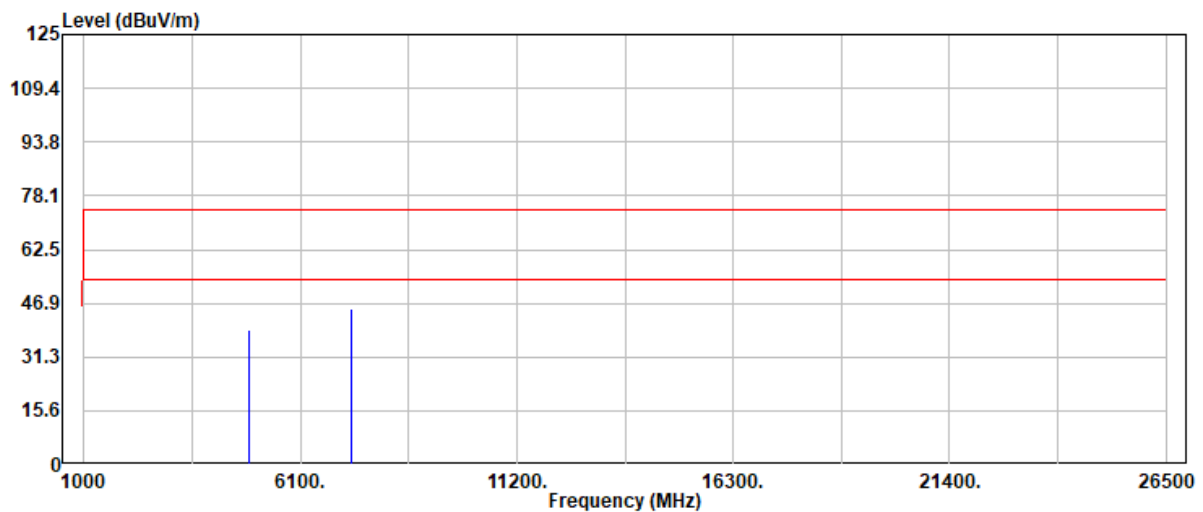
Freq	Read Level	Factor	Actual FS	Limit @3m	Margin	Detector Mode
-----	-----	-----	-----	-----	-----	-----
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	PK/QP/AV
4880.00	35.91	2.67	38.58	74.00	-35.42	Peak
4880.00	28.29	2.67	30.96	54.00	-23.04	Average
7320.00	35.27	9.36	44.63	74.00	-29.37	Peak
7320.00	26.83	9.36	36.19	54.00	-17.81	Average

Project No: TM-2503000493P
Report No.: TMWK2503001448KR

Page 43 / 45
Rev. 00

Project No : TM-2503000493P
Operation Band : BLE_2M
Frequency : 2440 MHz
Operation Mode : TX
EUT Pol : E2
Setting :

Test Date : 2025-07-04
Temp./Humi. : 25.6/56
Antenna Pol. : HORIZONTAL
Engineer : Tony.Chao
Test Chamber : 966A



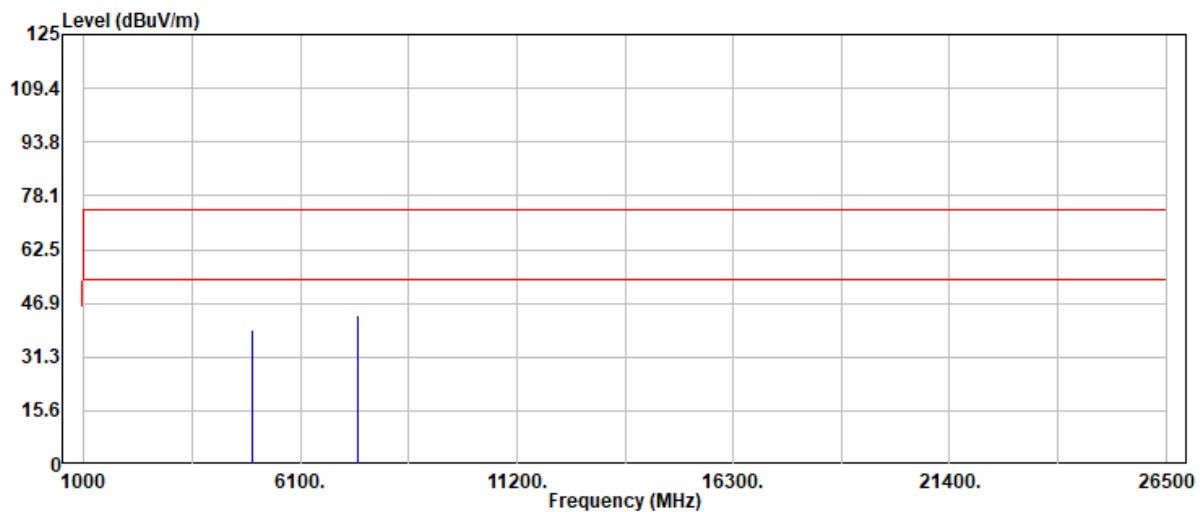
Freq	Read Level	Factor	Actual FS	Limit @3m	Margin	Detector Mode
-----	-----	-----	-----	-----	-----	-----
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	PK/QP/AV
4880.00	36.33	2.67	39.00	74.00	-35.00	Peak
4880.00	28.35	2.67	31.02	54.00	-22.98	Average
7320.00	35.78	9.36	45.14	74.00	-28.86	Peak
7320.00	27.15	9.36	36.51	54.00	-17.49	Average

Project No: TM-2503000493P
Report No.: TMWK2503001448KR

Page 44 / 45
Rev. 00

Project No : TM-2503000493P
Operation Band : BLE_2M
Frequency : 2480 MHz
Operation Mode : TX
EUT Pol : E2
Setting :

Test Date : 2025-07-04
Temp./Humi. : 25.6/56
Antenna Pol. : VERTICAL
Engineer : Tony.Chao
Test Chamber : 966A



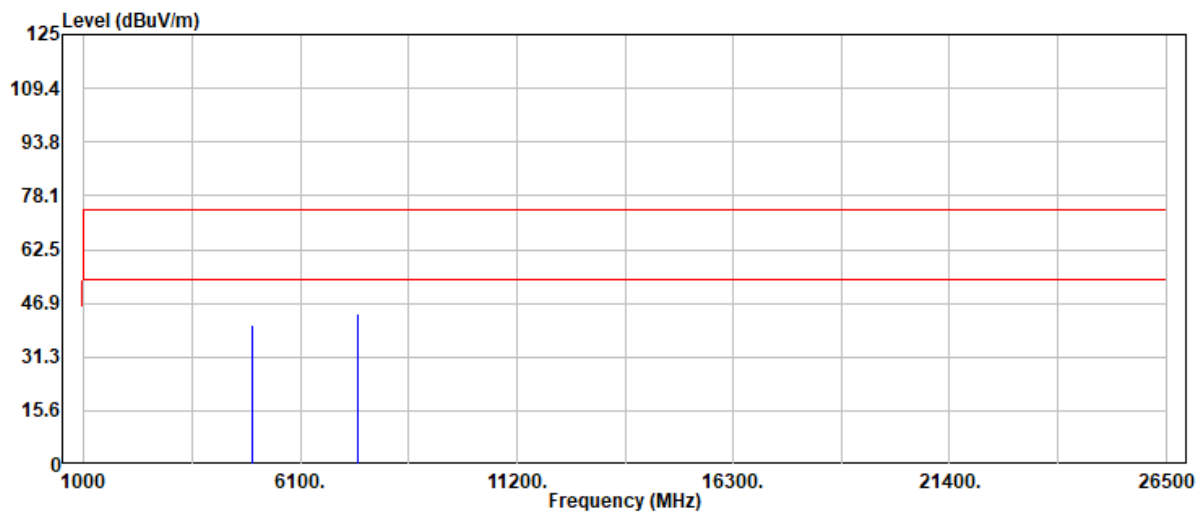
Freq	Read Level	Factor	Actual FS	Limit @3m	Margin	Detector Mode
-----	-----	-----	-----	-----	-----	-----
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	PK/QP/AV
4960.00	35.56	3.52	39.08	74.00	-34.92	Peak
4960.00	27.85	3.52	31.37	54.00	-22.63	Average
7440.00	34.12	9.46	43.58	74.00	-30.42	Peak
7440.00	26.57	9.46	36.03	54.00	-17.97	Average

Project No: TM-2503000493P
Report No.: TMWK2503001448KR

Page 45 / 45
Rev. 00

Project No : TM-2503000493P
Operation Band : BLE_2M
Frequency : 2480 MHz
Operation Mode : TX
EUT Pol : E2
Setting :

Test Date : 2025-07-04
Temp./Humi. : 25.6/56
Antenna Pol. : HORIZONTAL
Engineer : Tony.Chao
Test Chamber : 966A



Freq	Read Level	Factor	Actual FS	Limit @3m	Margin	Detector Mode
-----	-----	-----	-----	-----	-----	-----
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	PK/QP/AV
4960.00	36.88	3.52	40.40	74.00	-33.60	Peak
4960.00	28.43	3.52	31.95	54.00	-22.05	Average
7440.00	34.30	9.46	43.76	74.00	-30.24	Peak
7440.00	27.02	9.46	36.48	54.00	-17.52	Average

--End of Test Report--