

Project No: TM-2307000391P  
Report No.: TMWK2307002436KR

FCC ID: BJI-CL8852BU

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Rev.: 00

# RADIO TEST REPORT

## FCC 47 CFR PART 15 SUBPART C


<b>Test Standard</b>	<b>FCC Part 15.247</b>
<b>Product name</b>	<b>WLAN/BT USB Dongle</b>
<b>Brand Name</b>	<b>Toshiba Tec Corporation</b>
<b>Model No.</b>	<b>CL-8852BU</b>
<b>Test Result</b>	<b>Pass</b>
<b>Statements of Conformity</b>	<b>Determination of compliance is based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.</b>

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: 2013 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:




---

Dally Hong  
Sr. Engineer

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。

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## **Revision History**

Rev.	Issue Date	Revisions	Revised By
00	November 1, 2023	Initial Issue	Doris Chu

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## 1. GENERAL INFORMATION

### 1.1 EUT INFORMATION

Applicant	Toshiba Tec Corporation 6-78, Minami-Cho, Mishima-Shi, Shizuoka-ken 411-8520 Japan
Manufacturer	CC&C Technologies Inc. 8F, 150, Jian Yi Road, Zhonghe District, New Taipei City, Taiwan 235, R. O. C.
Factory	Kunshan CC&C Technologies, Co., Ltd No.9 building,3rd Main Street, Kunshan Free Trade Zone, Jiangsu Province, P. R. China
Equipment	WLAN/BT USB Dongle
Model No.	CL-8852BU
Model Discrepancy	N/A
Trade Name	Toshiba Tec Corporation
Received Date	July 21, 2023
Date of Test	July 26 ~ August 30, 2023
Power Operation	Power from host device.
HW Version	0B
SW Version	01

**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 channel	40 Channels

**Remark:**

Refer as ANSI C63.10: 2013 clause 5.6.1 Table 4 for test channels

Number of frequencies to be tested		
Frequency range in which device operates	Number of frequencies	Location in frequency range of operation
<input type="checkbox"/> 1 MHz or less	1	Middle
<input type="checkbox"/> 1 MHz to 10 MHz	2	1 near top and 1 near bottom
<input checked="" type="checkbox"/> More than 10 MHz	3	1 near top, 1 near middle, and 1 near bottom

## 1.3 ANTENNA INFORMATION

Antenna Type	<input type="checkbox"/> PIFA <input checked="" type="checkbox"/> PCB <input type="checkbox"/> Dipole <input type="checkbox"/> Coils
Antenna Gain	Gain: -13.33 dBi
Antenna Connector	N/A

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
Channel Bandwidth	± 2.7 %
RF output power (Power Meter + Power sensor)	± 0.243 dB
Power Spectral density	± 2.739 dB
Conducted Bandedge	± 2.739 dB
Conducted Spurious Emission	± 2.742 dB
Radiated Emission_9kHz-30MHz	± 3.115 dB
Radiated Emission_30MHz-200MHz	± 4.071 dB
Radiated Emission_200MHz-1GHz	± 4.419 dB
Radiated Emission_1GHz-6GHz	± 5.023 dB
Radiated Emission_6GHz-18GHz	± 5.068 dB
Radiated Emission_18GHz-26GHz	± 3.349 dB
Radiated Emission_26GHz-40GHz	± 3.229 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

AC Powerline Conducted Emission and Conducted:

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

Radiated emission 9kHz to 40GHz:

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

No. 12, Ln. 116, Wugong 3rd Rd., Wugu Dist., New Taipei City, Taiwan 24803

CAB identifier: TW1309

Test site	Test Engineer	Remark
AC Conduction Room	Tony Chao	-
Radiation	Czerny Lin	-
RF Conducted	Allen Shen	-

**Remark:** The lab has been recognized as the FCC accredited lab. under the KDB 974614 D01 and is listed in the FCC public 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
Power Sensor	Anritsu	MA2411B	1911386	2023-07-25	2024-07-24
Power Sensor	Anritsu	MA2411B	1911387	2023-07-25	2024-07-24
Power Meter	Anritsu	ML2496A	2136002	2022-11-24	2023-11-23
EXA Signal Analyzer	Keysight	N9010B	MY60242460	2023-02-02	2024-02-01
Software	Radio Test Software Ver. 21				

Radiated Emission Test Site: 966 D					
Name of Equipment	Manufacturer	Model	Serial Number	Calibration Date	Calibration Due
Antenna	SHWARZBECK	VULB 9168	1277	2023-01-13	2024-01-12
Pre-Amplifier	EMCI	EMC118A45SE	980820	2022-12-23	2023-12-22
Pre-Amplifier	EMCI	EMC330N	980853	2022-12-23	2023-12-22
Coaxial Cable	EMC	EMC101G-KM-KM-9000	220407+211228+230205	2023-03-21	2024-03-20
EXA Signal Analyzer	Agilent	N9010A	MY52220817	2023-03-09	2024-03-08
Coaxial Cable	EMC	EMCCFD400	211212+211222+211020	2023-03-21	2024-03-20
High Pass Filter	TITAN	T04H30001800070S01	211215-7-1	2023-02-02	2024-02-01
Thermo-Hygro Meter	EDSDS	EDS-A49	966D1	2023-05-11	2024-05-10
Pre-Amplifier	EMCI	EMC184045SE	980872	2023-01-03	2024-01-02
Horn Antenna	RF SPIN	DRH18-E	210301A18ES	2023-02-03	2024-02-02
Horn Antenna	SHWARZBECK	BBHA 9170	1134	2022-12-30	2023-12-29
Loop Antenna	SCHWARZBECK	FMZB 1513-60	1513-60-028	2022-12-27	2023-12-26
Software	e3 V9-210616c				

RF_Conduction(RF)					
Name of Equipment	Manufacturer	Model	Serial Number	Calibration Date	Calibration Due
EMI Test Receiver	R&S	ESCI	100064	2023-06-07	2024-06-06
LISN	TESEQ	LN2-16N	22012	2023-03-08	2024-03-07
Cable	EMCI	CFD300-NL	CERF	2023-06-27	2024-06-26
Software	EZ-EMC(CCS-3A1-CE-WUGU)				

**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

Support Unit List					
Name of Equipment	Manufacturer	Model	Serial Number	Calibration Date	Calibration Due
NB(E)	Lenovo	IBM 7663	N/A	N/A	N/A

## 1.8 TEST METHODOLOGY AND APPLIED STANDARDS

The test methodology, setups and results comply with all requirements in accordance with ANSI C63.10:2013, FCC Part 2, FCC Part 15.247, KDB 558074 D01.

## 2. TEST SUMMERY

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(a)(2)	4.2	6 dB Bandwidth	Pass
-	4.2	Occupied Bandwidth (99%)	Pass
15.247(b)(3)	4.3	Output Power Measurement	Pass
15.247(e)	4.4	Power Spectral Density	Pass
15.247(d)	4.5	Conducted Band Edge	Pass
15.247(d)	4.5	Conducted Spurious Emission	Pass
15.247(d)	4.6	Radiation Band Edge	Pass
15.247(d)	4.6	Radiation Spurious Emission	Pass

### 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 : 2442MHz 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 Conducted Emission	
Test Condition	AC Power line conducted emission for line and neutral
Power supply Mode	Mode 1: EUT Power by System
Worst Mode	<input checked="" type="checkbox"/> Mode 1 <input type="checkbox"/> Mode 2 <input type="checkbox"/> Mode 3 <input type="checkbox"/> Mode 4

Radiated Emission Measurement Above 1G	
Test Condition	Radiated Emission Above 1G
Power supply Mode	Mode 1: EUT Power by System
Worst Mode	<input checked="" type="checkbox"/> Mode 1
Worst Position	<input type="checkbox"/> Placed in fixed position. <input checked="" type="checkbox"/> Placed in fixed position at X-Plane (E2-Plane) <input type="checkbox"/> Placed in fixed position at Y-Plane (E1-Plane) <input type="checkbox"/> 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 System
Worst Mode	<input checked="" type="checkbox"/> Mode 1 <input type="checkbox"/> Mode 2 <input type="checkbox"/> Mode 3 <input type="checkbox"/> Mode 4

*Remark:*

1. The worst mode was record in this test report.
2. 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
3. AC power line conducted emission and for below 1G radiation emission were performed the EUT transmit at the highest output power channel as worse case.

### 3.3 EUT DUTY CYCLE

Temperature: 26.2°C

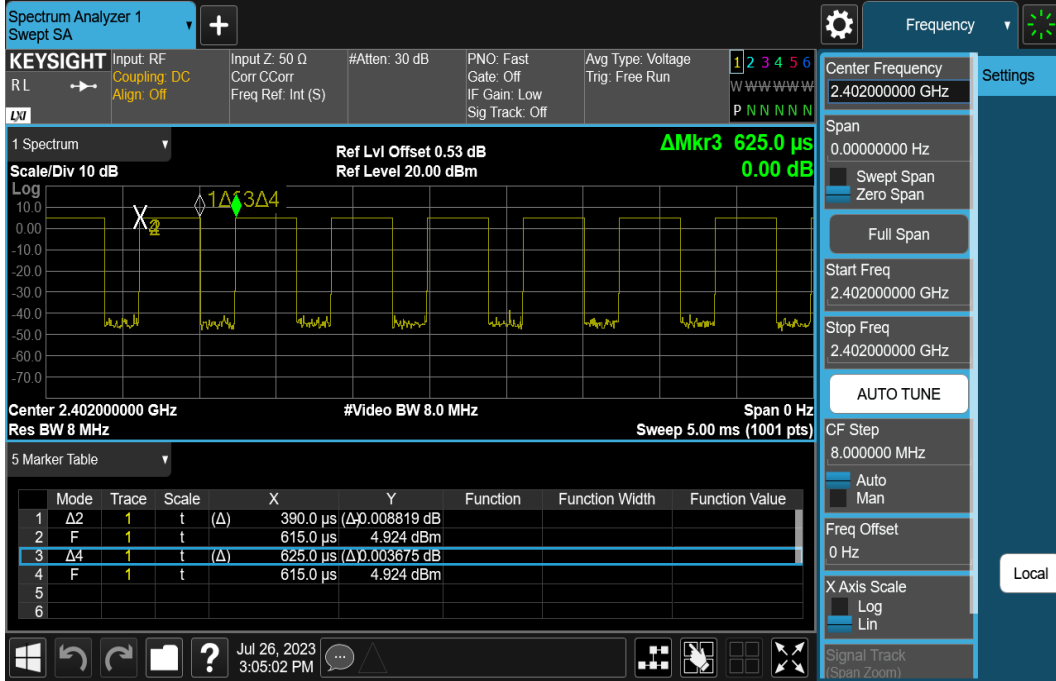
Test date: July 26, 2023

Humidity: 55% RH

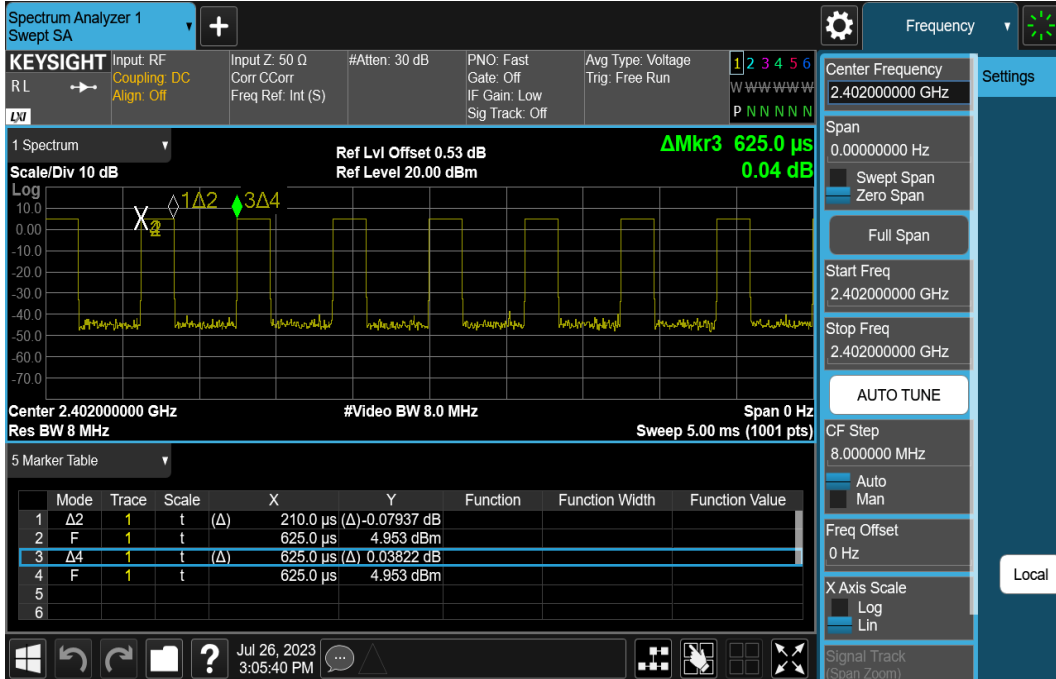
Tested by: Allen Shen

	Duty Cycle (%) = Ton / (Ton+Toff)	Duty Factor (dB) =10*log ( 1/Duty Cycle )	1/T (kHz)	VBW setting (kHz)
BLE 1M	62.40	2.05	2.56	3.00
BLE 2M	33.60	4.74	4.76	5.00

### BLE\_1M\_LowCH00-2402



### BLE\_2M\_LowCH00-2402



## 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 $\mu$ 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

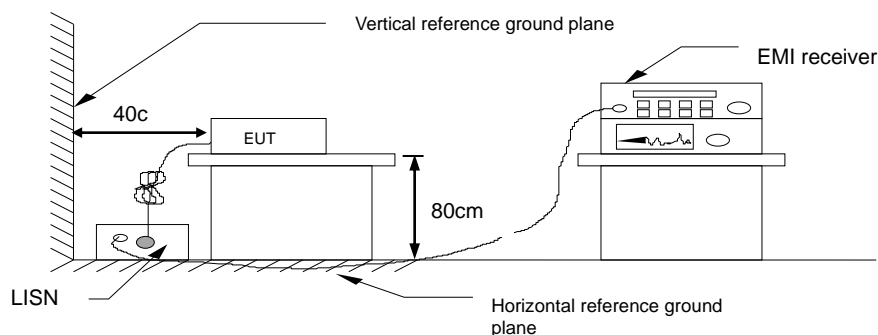
\* Decreases with the logarithm of the frequency.

#### 4.1.2 Test Procedure

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

1. The EUT was placed on a non-conducted table, which is 0.8m 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

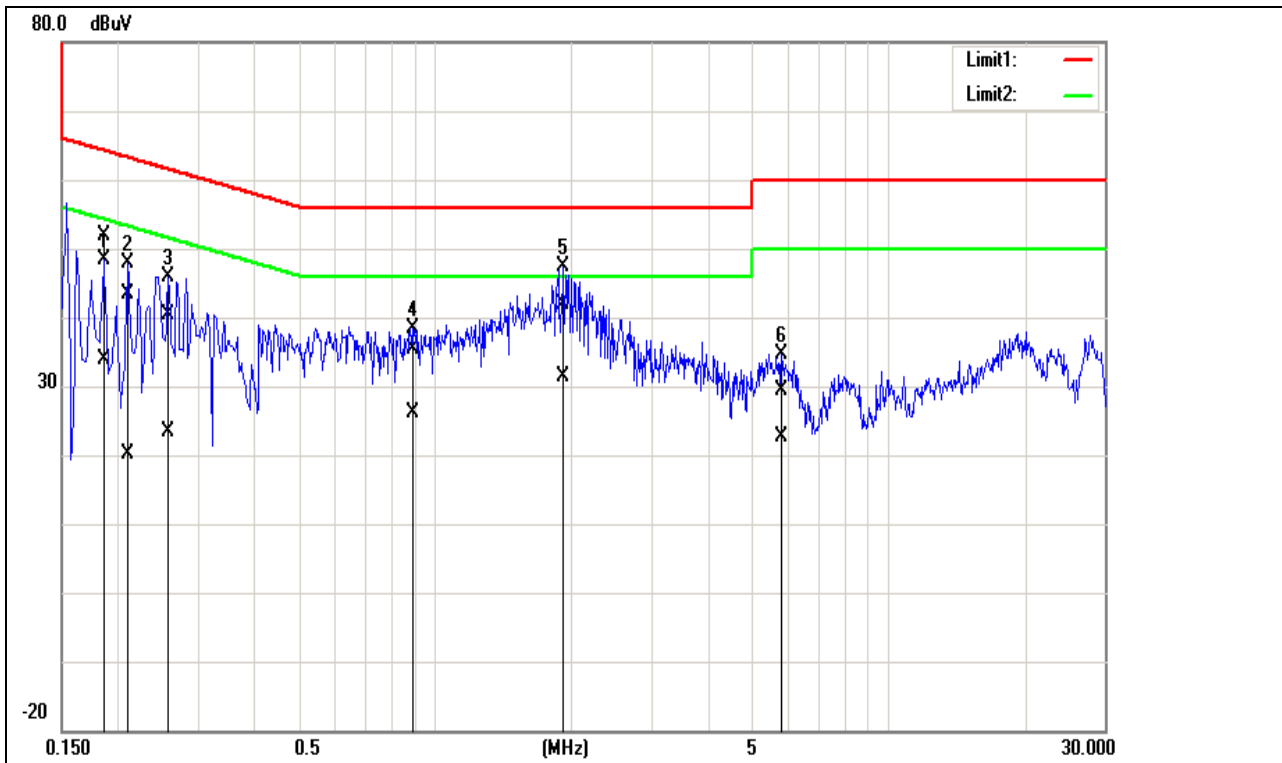
**Pass**

Report No.: TMWK2307002436KR

## Test Data

Job No.:	TMWK2307002436KR	Date:	2023/8/24
Company:	Toshiba Tec Corporation	Time:	PM 06:12:17
Standard:	NCC/FCC/IC QP	Temp.(°C)/Hum.(%):	25.5(°C)/53%
Test item:	Conduction test	Test By:	Tony Chao
Line:	L1	Test Voltage:	AC 120V/60Hz
Model:			

### Description:



No.	Frequency	QuasiPeak reading	Average reading	Correction factor	QuasiPeak result	Average result	QuasiPeak limit	Average limit	QuasiPeak margin	Average margin	Remark
	(MHz)	(dBuV)	(dBuV)	(dB)	(dBuV)	(dBuV)	(dBuV)	(dBuV)	(dB)	(dB)	
1*	0.1860	51.66	33.85	0.15	51.81	34.00	64.21	54.21	-12.40	-20.21	Pass
2	0.2100	43.31	20.02	0.15	43.46	20.17	63.21	53.21	-19.75	-33.04	Pass
3	0.2580	40.16	23.30	0.15	40.31	23.45	61.50	51.50	-21.19	-28.05	Pass
4	0.8940	35.28	25.97	0.16	35.44	26.13	56.00	46.00	-20.56	-19.87	Pass
5	1.9220	41.61	31.21	0.22	41.83	31.43	56.00	46.00	-14.17	-14.57	Pass
6	5.8300	29.08	22.40	0.29	29.37	22.69	60.00	50.00	-30.63	-27.31	Pass

Note: 1. Correction factor = LISN loss + Cable loss.



Report No.: TMWK2307002436KR

<b>Job No.:</b>	TMWK2307002436KR	<b>Date:</b>	2023/8/24
<b>Company:</b>	Toshiba Tec Corporation	<b>Time:</b>	PM 06:04:51
<b>Standard:</b>	NCC/FCC/IC QP	<b>Temp.(°C)/Hum.(%):</b>	25.5(°C)/53%
<b>Test item:</b>	Conduction test	<b>Test By:</b>	Tony Chao
<b>Line:</b>	N	<b>Test Voltage:</b>	AC 120V/60Hz
<b>Model:</b>			

**Description:**



No.	Frequency (MHz)	QuasiPeak reading (dBuV)	Average reading (dBuV)	Correction factor (dB)	QuasiPeak result (dBuV)	Average result (dBuV)	QuasiPeak limit (dBuV)	Average limit (dBuV)	QuasiPeak margin (dB)	Average margin (dB)	Remark
1*	0.1980	51.81	33.22	0.19	52.00	33.41	63.69	53.69	-11.69	-20.28	Pass
2	0.2460	44.98	31.91	0.19	45.17	32.10	61.89	51.89	-16.72	-19.79	Pass
3	0.2940	41.11	24.52	0.19	41.30	24.71	60.41	50.41	-19.11	-25.70	Pass
4	1.8140	42.59	31.34	0.25	42.84	31.59	56.00	46.00	-13.16	-14.41	Pass
5	3.9020	30.26	23.32	0.31	30.57	23.63	56.00	46.00	-25.43	-22.37	Pass
6	6.1860	28.24	21.57	0.34	28.58	21.91	60.00	50.00	-31.42	-28.09	Pass

**Note:** 1. Correction factor = LISN loss + Cable loss.

## 4.2 6dB BANDWIDTH AND OCCUPIED BANDWIDTH(99%)

### 4.2.1 Test Limit

According to §15.247(a)(2)

#### 6 dB Bandwidth :

Limit	Shall be at least 500kHz
-------	--------------------------

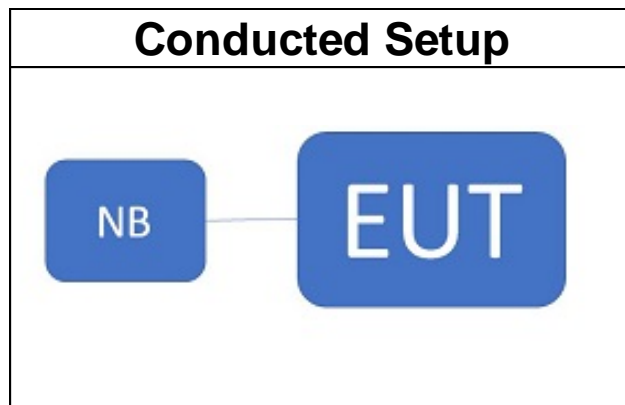
Occupied Bandwidth(99%) : For reporting purposes only.

### 4.2.2 Test Procedure

Test method Refer as KDB 558074 D01 and ANSI C63.10: 2013 clause 6.9.2.

1. The EUT RF output connected to the spectrum analyzer by RF cable.
2. Setting maximum power transmit of EUT
3. SA set RBW = 100kHz, VBW = 300kHz and Detector = Peak, to measurement 6 dB Bandwidth and 99% Bandwidth.
4. Measure and record the result of 6 dB Bandwidth and 99% Bandwidth. in the test report.

### 4.2.3 Test Setup



#### 4.2.4 Test Result

Temperature: 26.2°C                      Test date: July 26, 2023  
Humidity: 55% RH                      Tested by: Allen Shen

##### BLE 1M mode

Frequency (MHz)	6dB BW (MHz)	Required BW (MHz)	Result
2402	0.6537	$\geq 0.5$	PASS
2442	0.6632	$\geq 0.5$	PASS
2480	0.6542	$\geq 0.5$	PASS

##### BLE 2M mode

Frequency (MHz)	6dB BW (MHz)	Required BW (MHz)	Result
2402	0.9987	$\geq 0.5$	PASS
2442	1.125	$\geq 0.5$	PASS
2480	1.128	$\geq 0.5$	PASS

**BLE 1M mode**

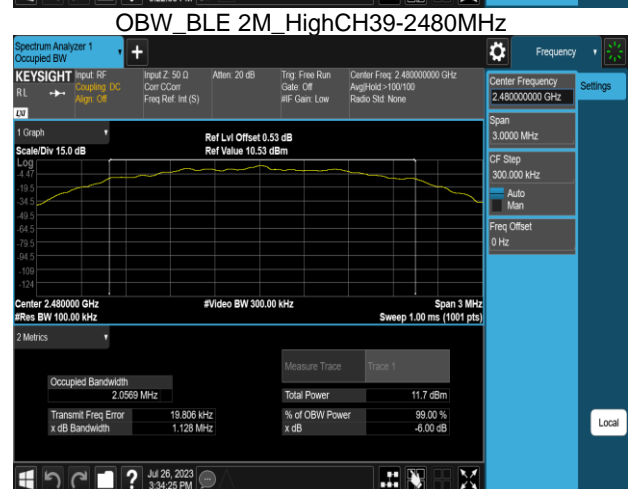
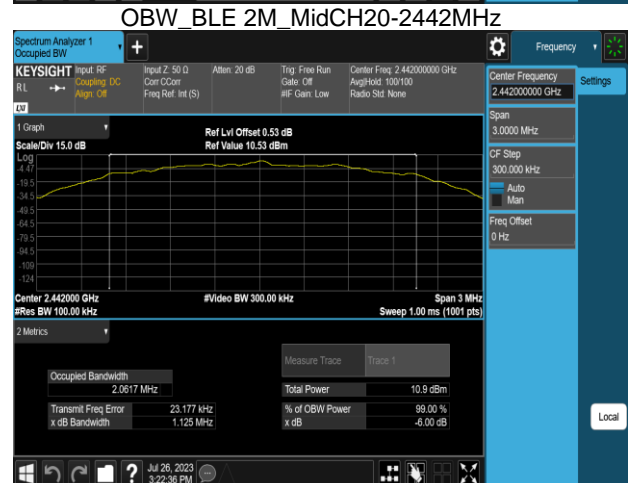
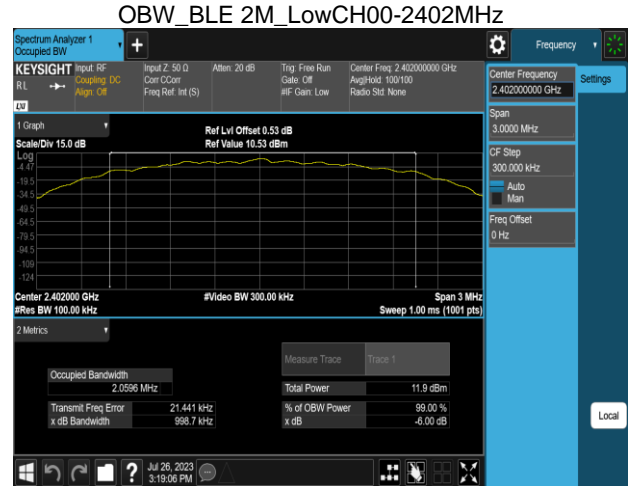
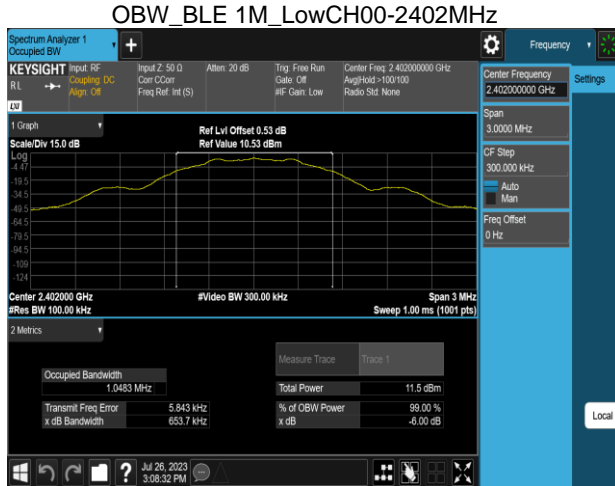
Frequency (MHz)	99%Bandwidth (MHz)
2402	1.0325
2442	1.0222
2480	1.0330

**BLE 2M mode**

Frequency (MHz)	99%Bandwidth (MHz)
2402	2.0408
2442	2.0353
2480	2.0285

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### Test Data (6dB BANDWIDTH)



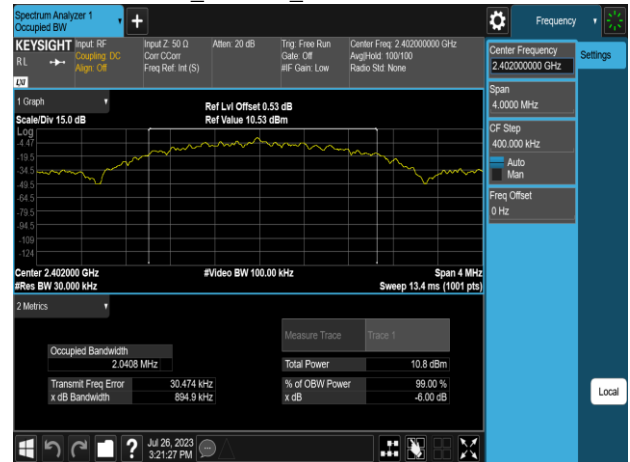
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### Test Data (BANDWIDTH 99%)

IC OBW\_BLE 1M\_LowCH00-2402MHz



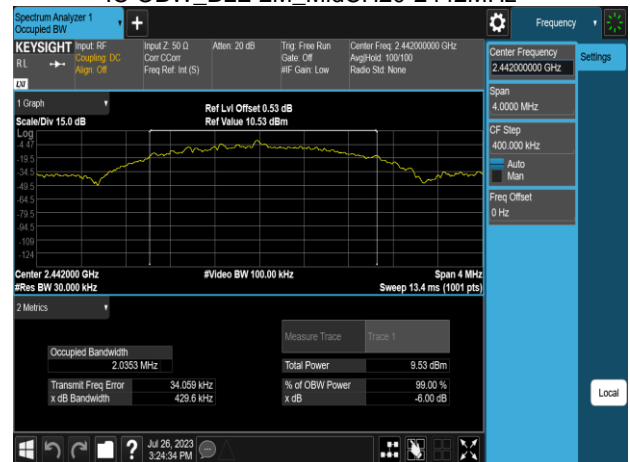
IC OBW\_BLE 2M\_LowCH00-2402MHz



IC OBW\_BLE 1M\_MidCH20-2442MHz



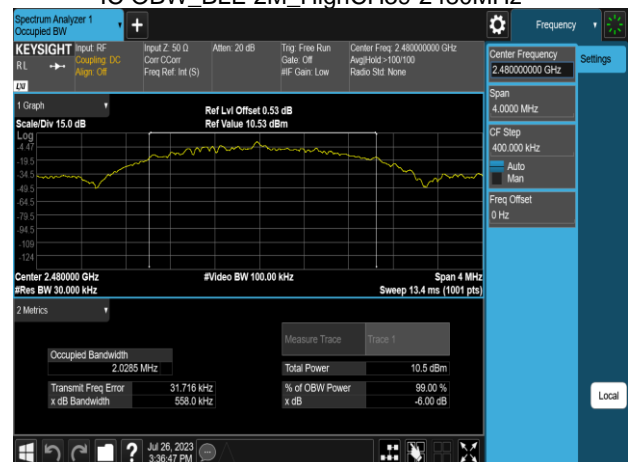
IC OBW\_BLE 2M\_MidCH20-2442MHz



IC OBW\_BLE 1M\_HighCH39-2480MHz



IC OBW\_BLE 2M\_HighCH39-2480MHz



## 4.3 OUTPUT POWER MEASUREMENT

### 4.3.1 Test Limit

According to §15.247(b)(3)

**Peak output power** :

#### FCC

Alternatively, frequency hopping systems operating in the 2400-2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater, provided the systems operate with an output power no greater than 125 mW.

Limit	<input checked="" type="checkbox"/> Antenna not exceed 6 dBi : 30dBm <input type="checkbox"/> Antenna with DG greater than 6 dBi [ Limit = 30 – (DG – 6) ] <input type="checkbox"/> Point-to-point operation
-------	---

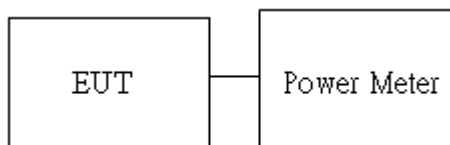
**Average output power** : For reporting purposes only.

### 4.3.2 Test Procedure

Test method Refer as KDB 558074 D01

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.

### 4.3.3 Test Setup



Report No.: TMWK2307002436KR

#### 4.3.4 Test Result

Temperature: 26.2°C

Test date: July 26, 2023

Humidity: 55% RH

Tested by: Allen Shen

#### Peak & Average output power :

##### BLE 1M mode:

CH	Frequency (MHz)	Power set	Peak Output Power (dBm)	Required Limit (dBm)
Low	2402	default	4.91	30
Mid	2442	default	3.78	30
High	2480	default	4.71	30
CH	Frequency (MHz)	Power set	Avg. Output Power (dBm)	Required Limit (dBm)
Low	2402	default	4.78	30
Mid	2442	default	3.72	30
High	2480	default	4.66	30

**\*Note:**

**1. Measured by power meter, cable loss 0.53 dB + Duty cycle factor has been offsetted to the power meter for Avg. power and cable loss has been offsetted for Peak power measurement.**



**BLE 2M mode:**

CH	Frequency (MHz)	Power set	Peak Output Power (dBm)	Required Limit (dBm)
Low	2402	default	5.01	30
Mid	2442	default	3.87	30
High	2480	default	4.86	30
CH	Frequency (MHz)	Power set	Avg. Output Power (dBm)	Required Limit (dBm)
Low	2402	default	4.99	30
Mid	2442	default	3.83	30
High	2480	default	4.77	30

**\*Note:**

**1. Measured by power meter, cable loss 0.53 dB + Duty cycle factor has been offsetted to the power meter for Avg. power and cable loss has been offsetted for Peak power measurement.**

## 4.4 POWER SPECTRAL DENSITY

### 4.4.1 Test Limit

According to §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.

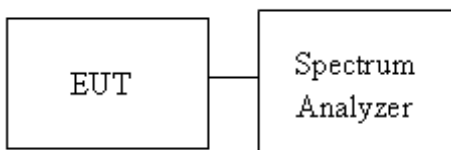
Limit	<input checked="" type="checkbox"/> Antenna not exceed 6 dBi : 8dBm <input type="checkbox"/> Antenna with DG greater than 6 dBi [ Limit = 8 – (DG – 6) ] <input type="checkbox"/> Point-to-point operation :
-------	---

### 4.4.2 Test Procedure

Test method Refer as KDB 558074 D01

1. The EUT RF output connected to the spectrum analyzer by RF cable.
2. Setting maximum power transmit of EUT
3. SA set RBW = 3kHz, VBW = 30kHz, Span = 1.5 times DTS Bandwidth (6 dB BW), Detector = Peak, Sweep Time = Auto and Trace = Max hold.
4. The path loss was compensated to the results for each measurement by SA.
5. Mark the maximum level.
6. Measure and record the result of power spectral density. in the test report.

### 4.4.3 Test Setup



#### 4.4.4 Test Result

Temperature: 26.2°C

Test date: July 26, 2023

Humidity: 55% RH

Tested by: Allen Shen

##### BLE 1M mode

Frequency (MHz)	RF Power Density (dBm/3kHz)	Maximum Limit (dBm/3kHz)	Result
2402	-9.18	8	PASS
2442	-11.30	8	PASS
2480	-9.24	8	PASS

**\*Note:**

*1.cable loss as 0.53dB that offsets in the spectrum*

##### BLE 2M mode

Frequency (MHz)	RF Power Density (dBm/3kHz)	Maximum Limit (dBm/3kHz)	Result
2402	-11.60	8	PASS
2442	-13.70	8	PASS
2480	-12.47	8	PASS

**\*Note:**

*1.cable loss as 0.53dB that offsets in the spectrum*



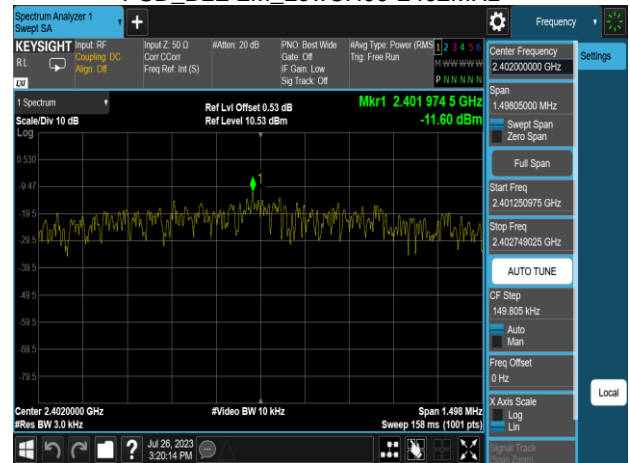
Report No.: TMWK2307002436KR

### Test Data

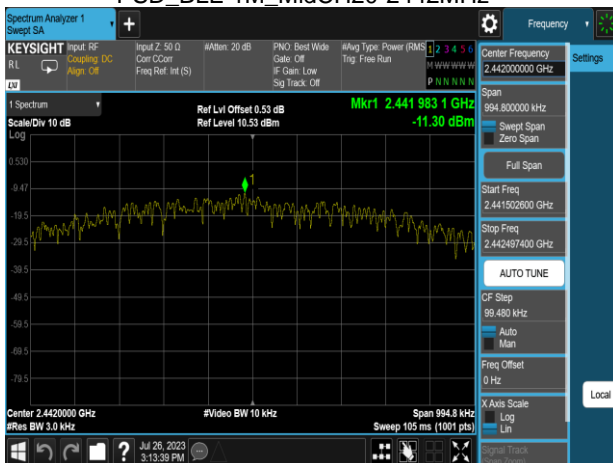
PSD\_BLE 1M\_LowCH00-2402MHz



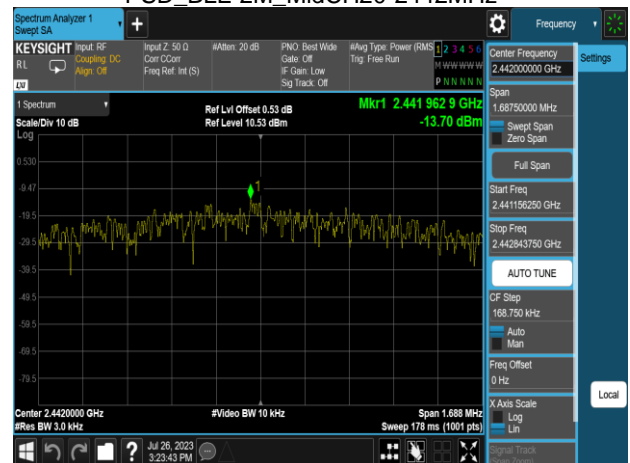
PSD\_BLE 2M\_LowCH00-2402MHz



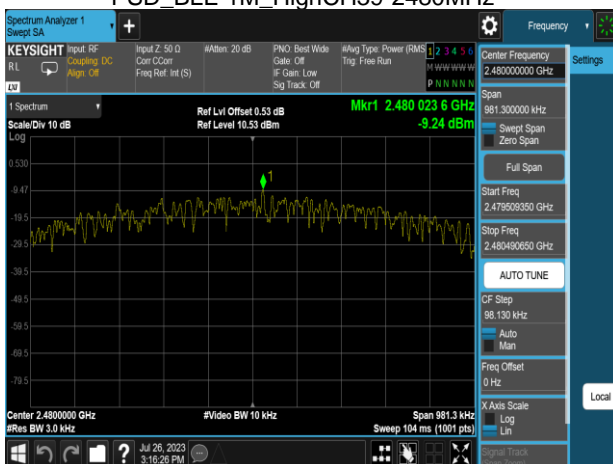
PSD\_BLE 1M\_MidCH20-2442MHz



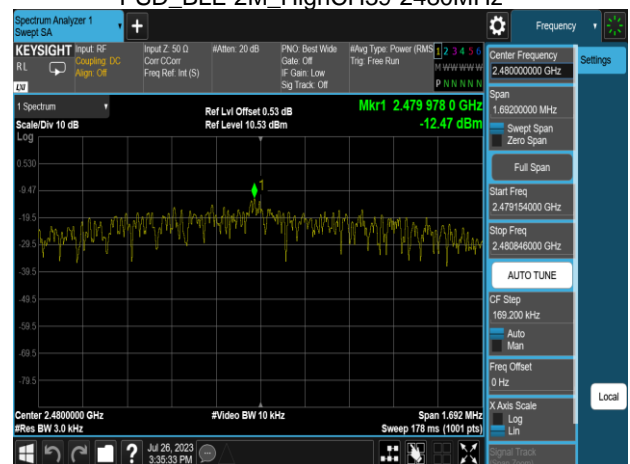
PSD\_BLE 2M\_MidCH20-2442MHz



PSD\_BLE 1M\_HighCH39-2480MHz



PSD\_BLE 2M\_HighCH39-2480MHz



## 4.5 CONDUCTED BAND EDGE AND SPURIOUS EMISSION

### 4.5.1 Test Limit

According to §15.247(d)

**FCC:** In any 100 kHz bandwidth outside the authorized frequency band,

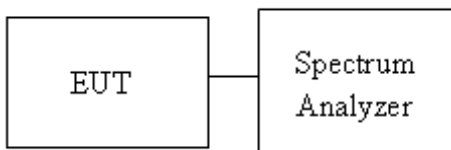
Non-restricted bands shall be attenuated at least 20 dB/30 dB relative to the maximum PSD level in 100 kHz by RF conducted or a radiated measurement which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a).

### 4.5.2 Test Procedure

Test method Refer as KDB 558074 D01

1. EUT RF output port connected to the SA by RF cable, and the path loss was compensated to result.
2. SA setting, RBW=100kHz, VBW=300kHz, Detector=Peak, Trace mode = max hold, SWT = Auto.
3. In any 100 kHz bandwidth outside the authorized frequency band, shall be attenuated at least 20 dB relative to the maximum in-band peak PSD level in 100 kHz when conducted power procedure is used. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, the attenuation required under this paragraph shall be 30 dB instead of 20 dB.

### 4.5.3 Test Setup



### 4.5.4 Test Result

**Temperature:** 26.2°C

**Test date:** July 26, 2023

**Humidity:** 55% RH

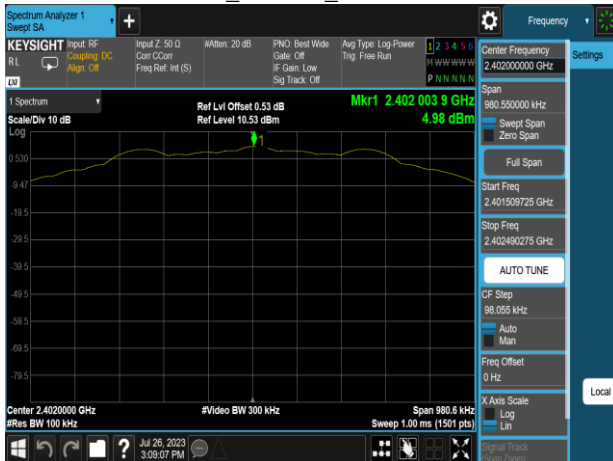
**Tested by:** Allen Shen



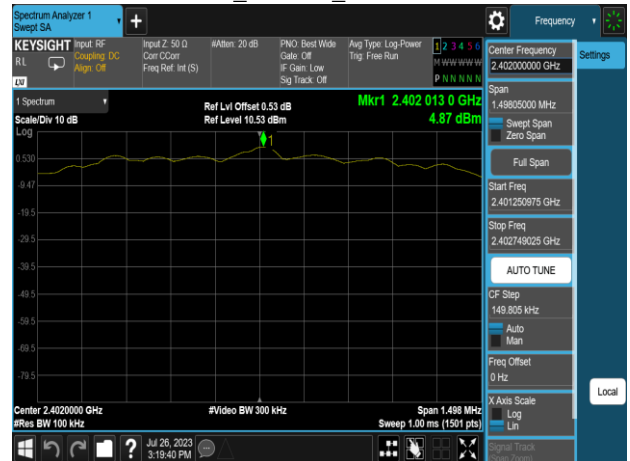
Report No.: TMWK2307002436KR

### Test Data

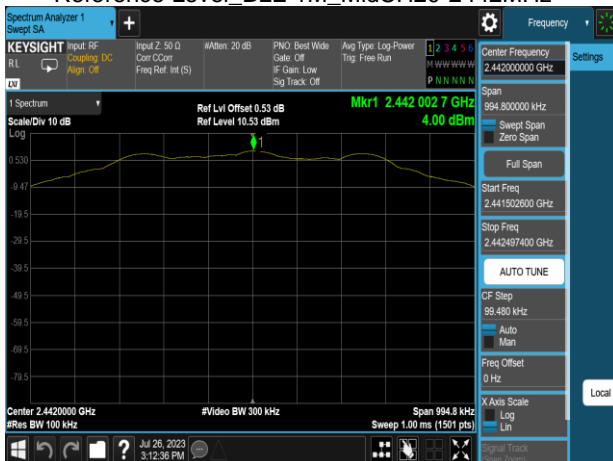
Reference Level\_BLE 1M\_LowCH00-2402MHz



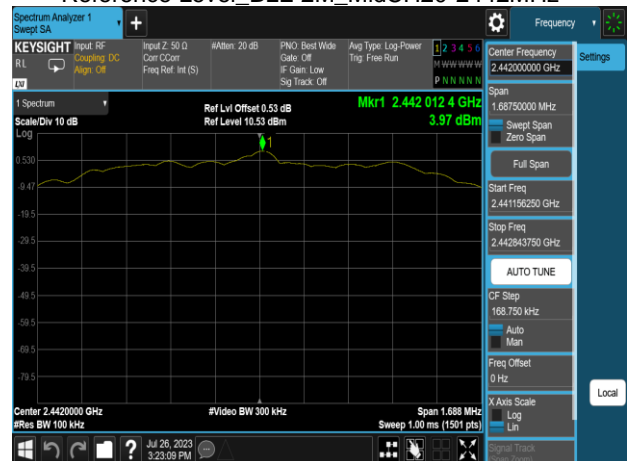
Reference Level\_BLE 2M\_LowCH00-2402MHz



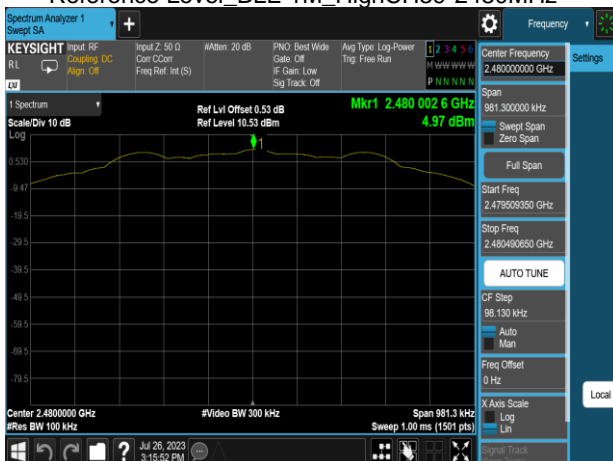
Reference Level\_BLE 1M\_MidCH20-2442MHz



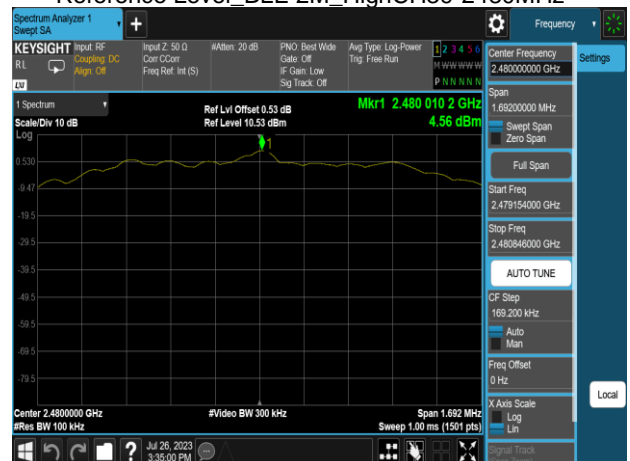
Reference Level\_BLE 2M\_MidCH20-2442MHz



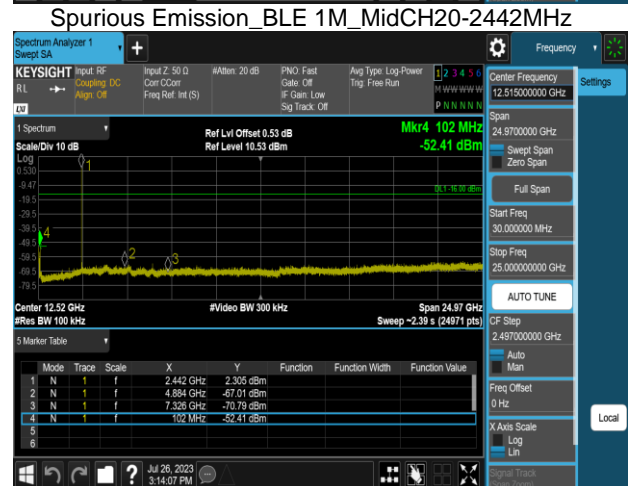
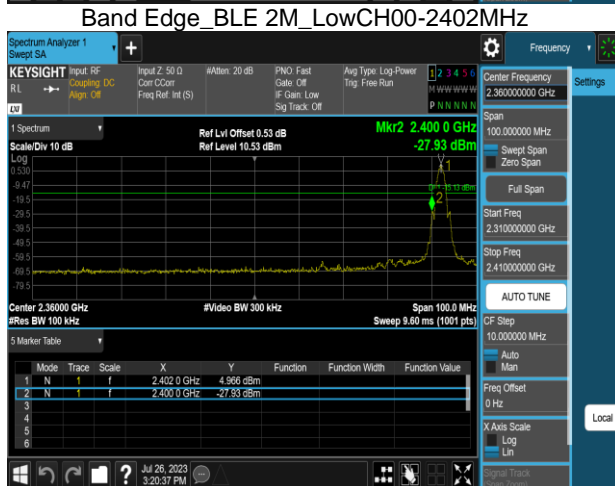
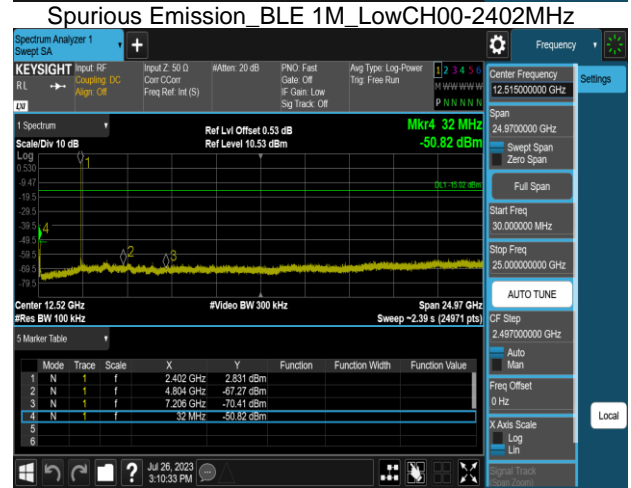
Reference Level\_BLE 1M\_HighCH39-2480MHz



Reference Level\_BLE 2M\_HighCH39-2480MHz

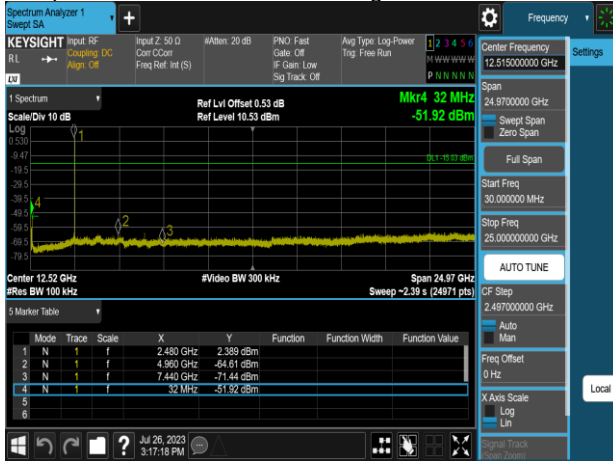


Report No.: TMWK2307002436KR

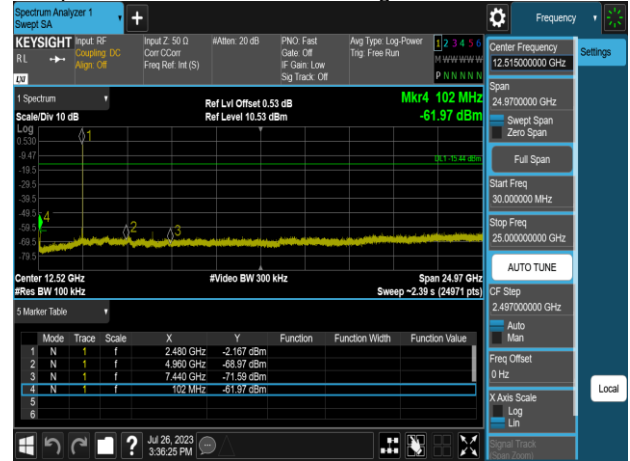


Report No.: TMWK2307002436KR

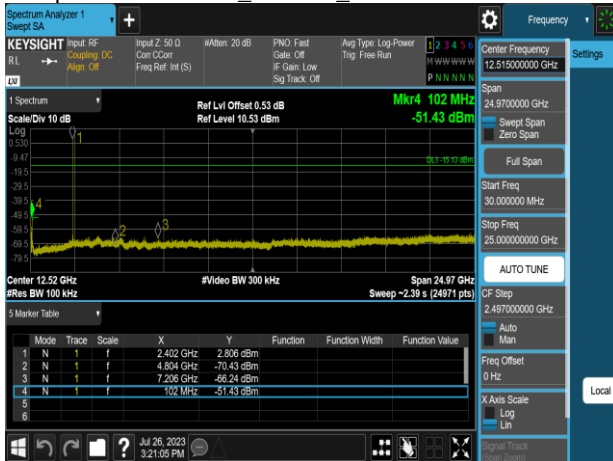
Spurious Emission\_BLE 1M\_HighCH39-2480MHz



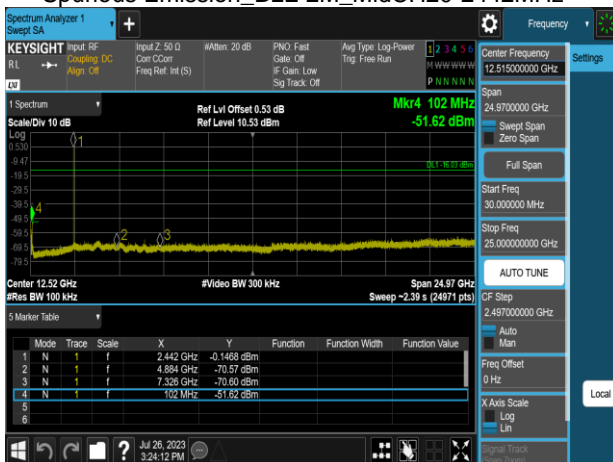
Spurious Emission\_BLE 2M\_HighCH39-2480MHz



Spurious Emission\_BLE 2M\_LowCH00-2402MHz



Spurious Emission\_BLE 2M\_MidCH20-2442MHz





Report No.: TMWK2307002436KR

## 4.6 RADIATION BANDEDGE AND SPURIOUS EMISSION

### 4.6.1 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.

## 4.6.2 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: 2013, 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.

### Remark:

1. Although these tests were performed other than open area test site, adequate comparison measurements were confirmed against 30 m open are 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.
  2. No emission found between lowest internal used/generated frequency to 30MHz (9kHz~30MHz).
3. The SA setting following :
- (1) Below 1G : RBW = 100kHz, VBW  $\geq$  3 RBW, Sweep = Auto, Detector = Peak, Trace = Max hold.
  - (2) Above 1G :
    - (2.1) For Peak measurement : RBW = 1MHz, VBW  $\geq$  3 RBW, Sweep = Auto, Detector = Peak, Trace = Max hold.
    - (2.2) For Average measurement : RBW = 1MHz, VBW
      - If Duty Cycle  $\geq$  98%, VBW=10Hz.
      - If Duty Cycle < 98%, VBW=1/T.

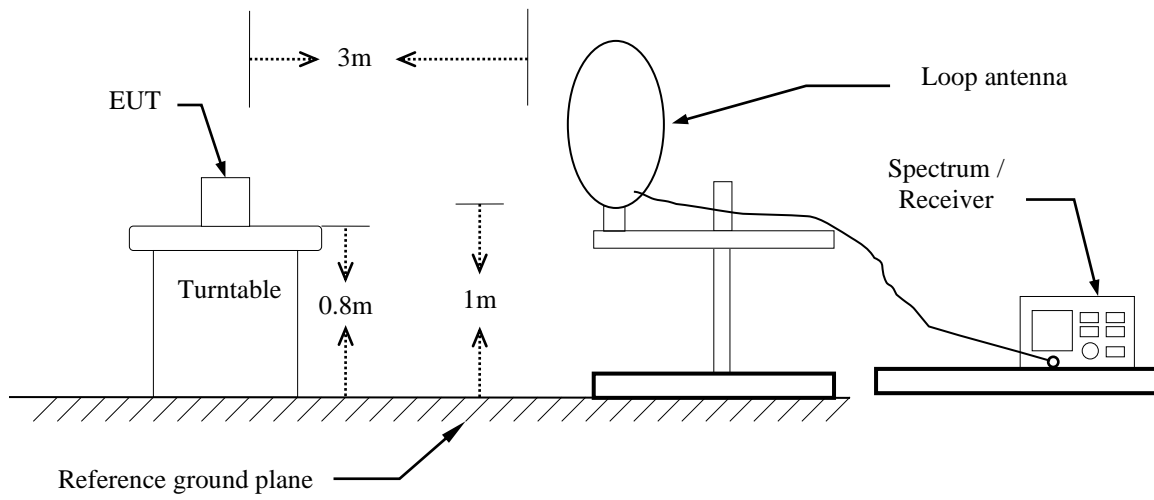
### 4. Data result

Actual FS=Spectrum Reading Level+Factor

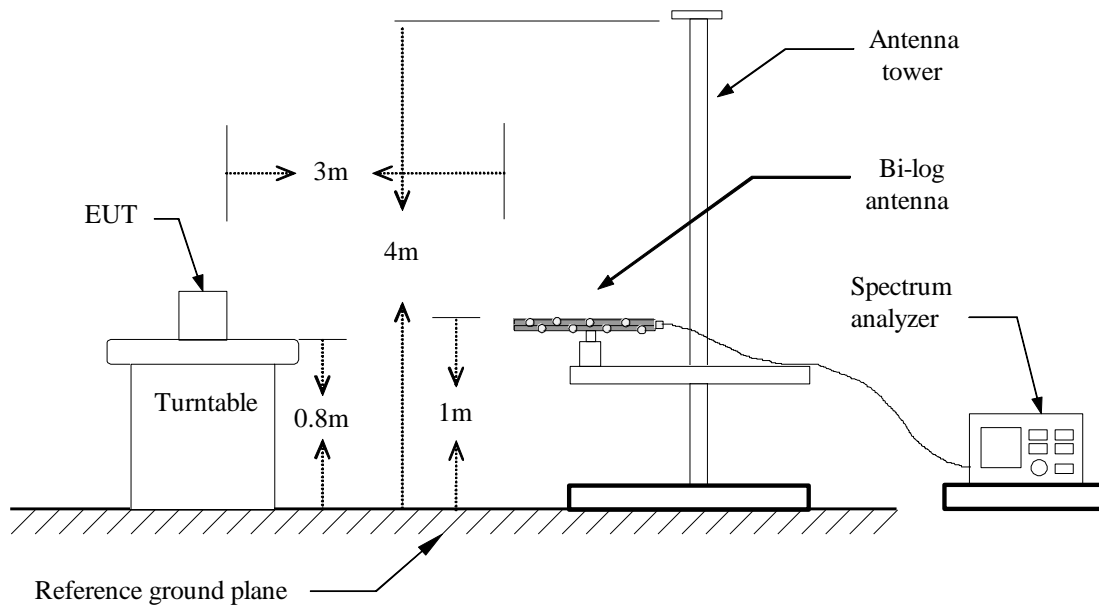
Margin=Actual FS- Limit

## 4.6.3 Test Setup

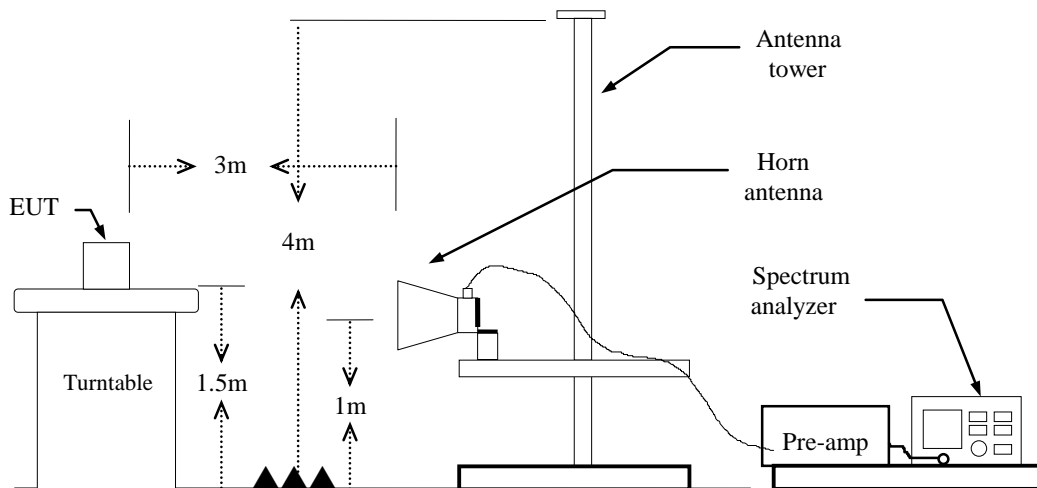
### 9kHz ~ 30MHz



### 30MHz ~ 1GHz



## Above 1 GHz

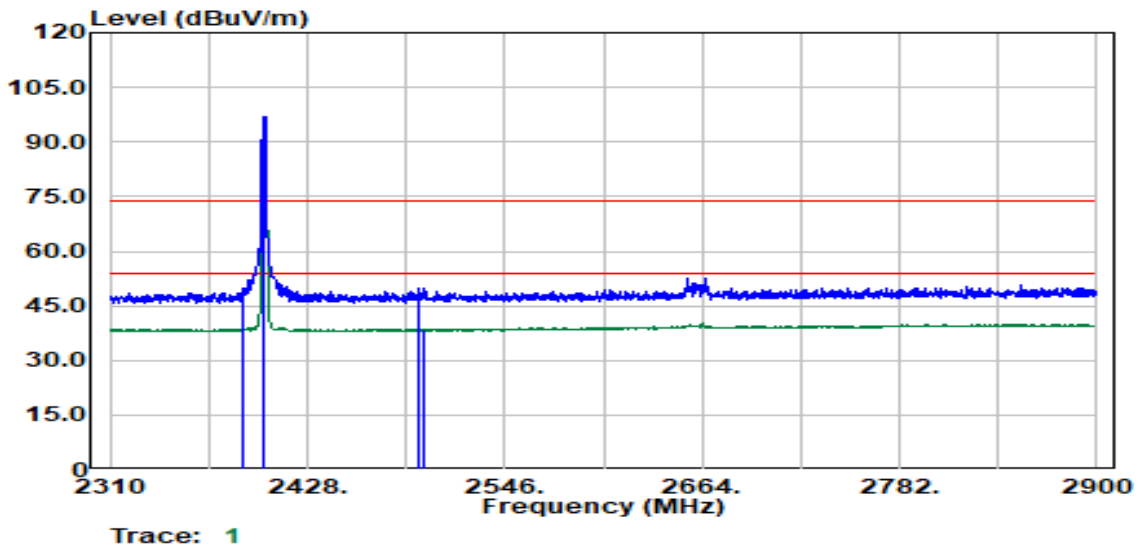


Report No.: TMWK2307002436KR

### 4.6.4 Test Result

#### Band Edge Test Data

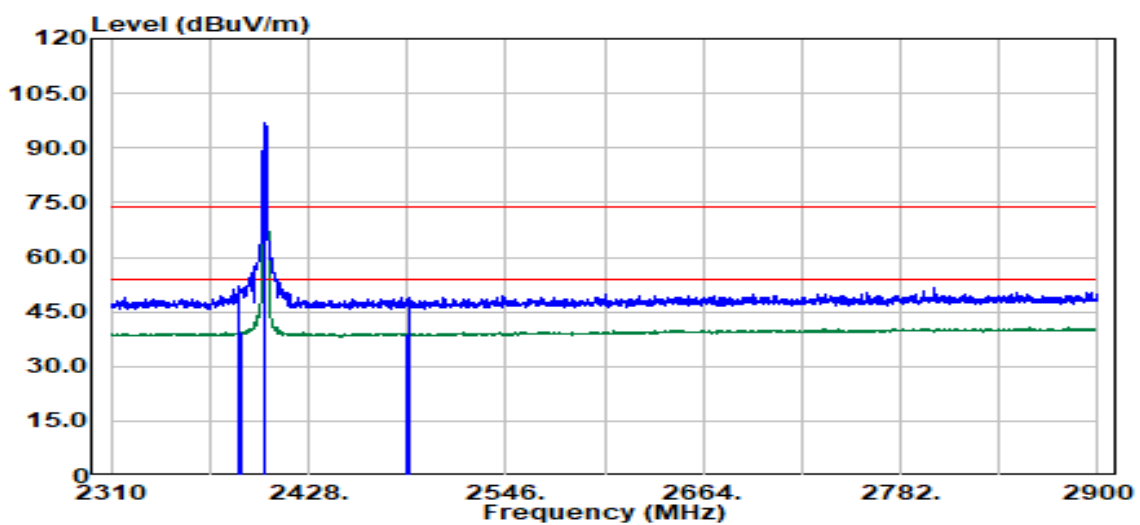
Report Number	:TMWK2307002436KR	Test Date	:2023-08-30
Operation Band	:BLE 1M	Temp./Humi.	:25.3/56
Frequency	:2402 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:Bandedge	Engineer	:Czerny Lin
EUT Pol	:E2	Test Chamber	: 966D
Setting	:		



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dB $\mu$ V	Factor dB	Actual FS dB $\mu$ V/m	Limit dB $\mu$ V/m	Margin dB
2389.78	Average	33.83	4.80	38.63	54.00	-15.37
2390.00	Peak	45.03	4.80	49.84	74.00	-24.16
2402.00	Peak	92.59	4.51	97.10	--	--
2402.00	Average	91.99	4.51	96.50	--	--
2494.58	Peak	45.18	4.59	49.77	74.00	-24.23
2497.33	Average	33.98	4.62	38.61	54.00	-15.39

Report No.: TMWK2307002436KR

Report Number	:TMWK2307002436KR	Test Date	:2023-08-30
Operation Band	:BLE 1M	Temp./Humi.	:25.3/56
Frequency	:2402 MHz	Antenna Pol.	:HORIZONTAL
Operation Mode	:Bandedge	Engineer	:Czerny Lin
EUT Pol	:E2	Test Chamber	: 966D
Setting	:		

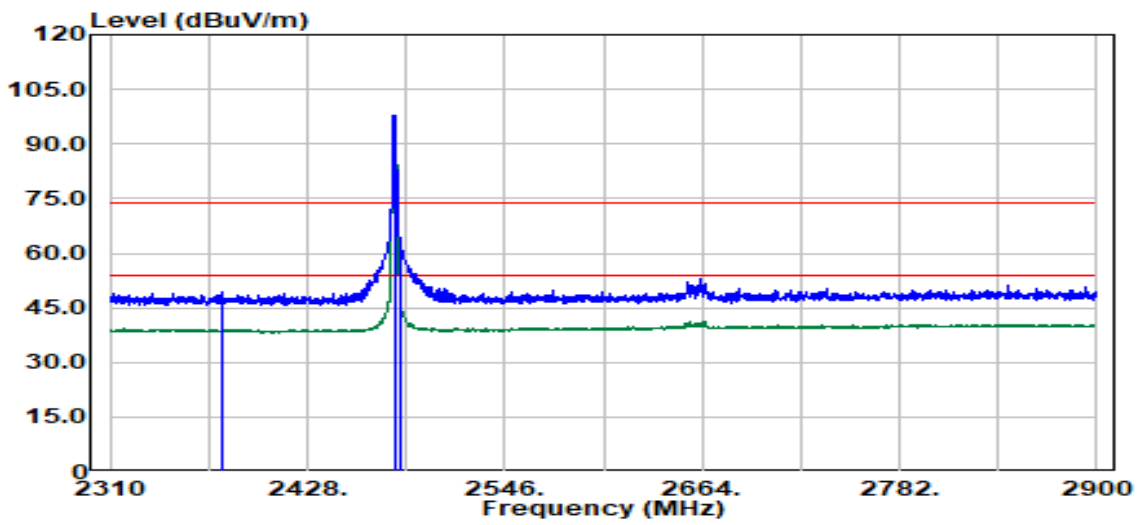


Trace: 1

Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dB $\mu$ V	Factor dB	Actual FS dB $\mu$ V/m	Limit dB $\mu$ V/m	Margin dB
2387.03	Peak	47.21	4.80	52.01	74.00	-21.99
2387.53	Average	34.73	4.80	39.53	54.00	-14.47
2402.00	Peak	92.47	4.51	96.98	--	--
2402.00	Average	91.04	4.51	95.55	--	--
2486.08	Average	34.41	4.59	39.00	54.00	-15.00
2489.08	Peak	44.21	4.56	48.76	74.00	-25.24

Report No.: TMWK2307002436KR

Report Number	:TMWK2307002436KR	Test Date	:2023-08-30
Operation Band	:BLE 1M	Temp./Humi.	:25.3/56
Frequency	:2480 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:Bandedge	Engineer	:Czerny Lin
EUT Pol	:E2	Test Chamber	: 966D
Setting	:		



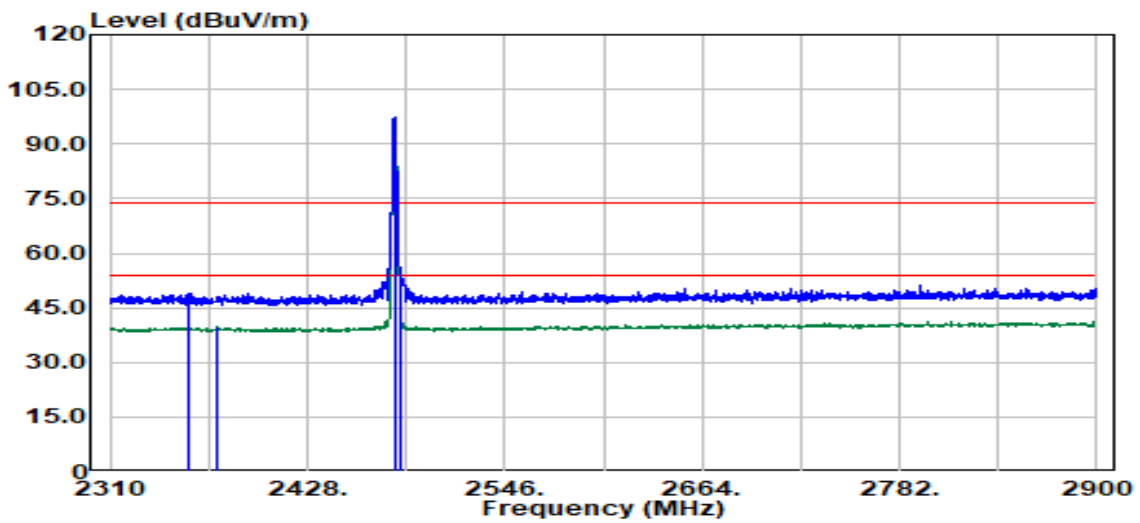
Trace: 1

Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dB $\mu$ V	Factor dB	Actual FS dB $\mu$ V/m	Limit dB $\mu$ V/m	Margin dB
2376.78	Peak	44.54	4.76	49.30	74.00	-24.70
2376.78	Average	34.58	4.76	39.34	54.00	-14.66
2480.00	Peak	93.21	4.65	97.86	--	--
2480.00	Average	92.90	4.65	97.55	--	--
2483.82	Peak	58.00	4.61	62.61	74.00	-11.39
2483.82	Average	40.94	4.61	45.55	54.00	-8.45

Report No.: TMWK2307002436KR

Report Number :TMWK2307002436KR  
 Operation Band :BLE 1M  
 Frequency :2480 MHz  
 Operation Mode :Bandedge  
 EUT Pol :E2  
 Setting :

Test Date :2023-08-30  
 Temp./Humi. :25.3/56  
 Antenna Pol. :HORIZONTAL  
 Engineer :Czerny Lin  
 Test Chamber : 966D

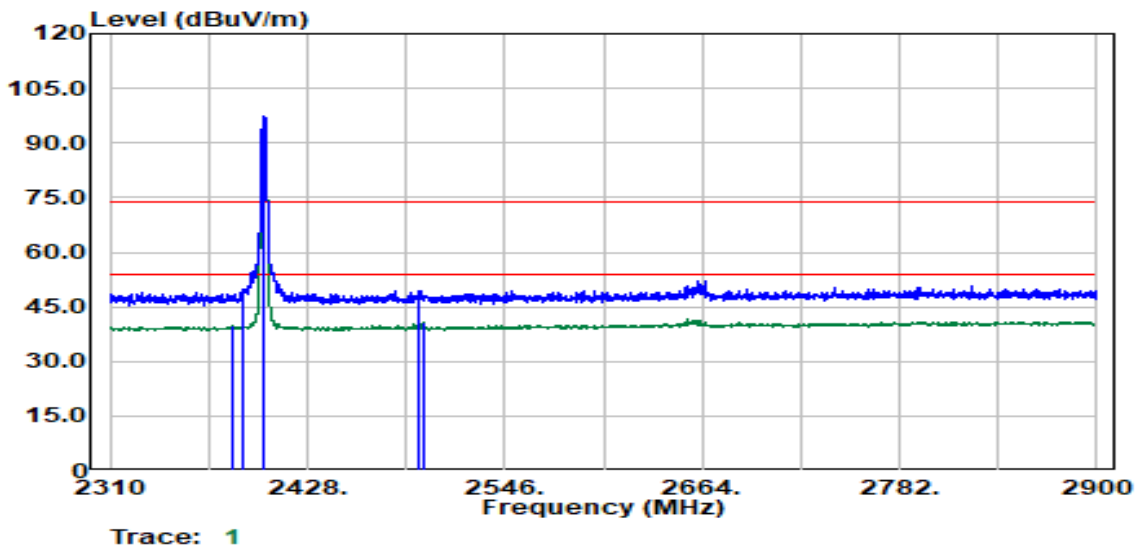


Trace: 1

Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dB $\mu$ V	Factor dB	Actual FS dB $\mu$ V/m	Limit dB $\mu$ V/m	Margin dB
2357.27	Peak	44.04	4.81	48.85	74.00	-25.15
2374.03	Average	34.90	4.73	39.63	54.00	-14.37
2480.00	Peak	92.91	4.65	97.56	--	--
2480.00	Average	92.36	4.65	97.00	--	--
2483.57	Peak	50.13	4.61	54.74	74.00	-19.26
2483.57	Average	38.67	4.61	43.28	54.00	-10.72



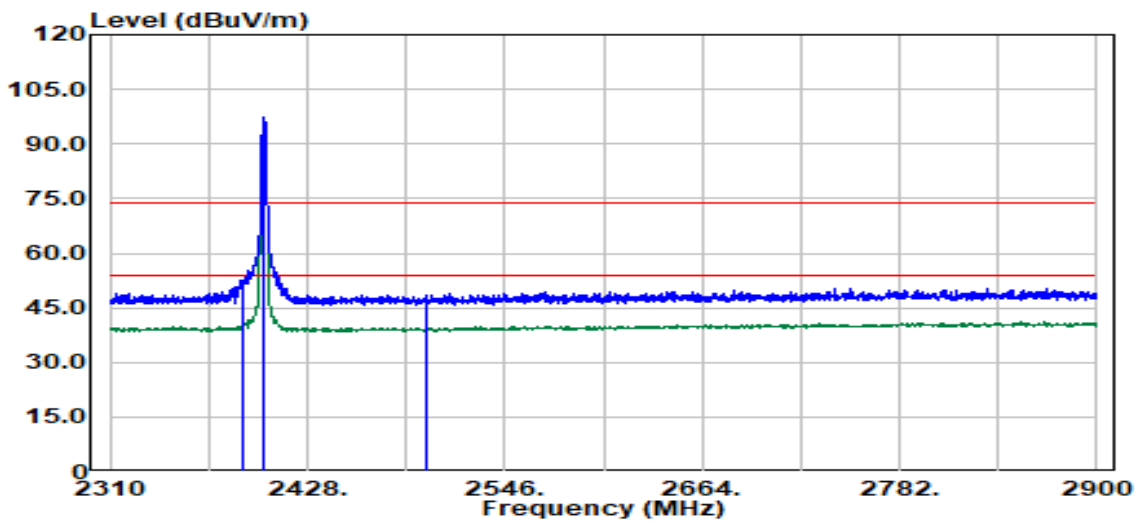
Report Number	:TMWK2307002436KR	Test Date	:2023-08-30
Operation Band	:BLE 2M	Temp./Humi.	:25.3/56
Frequency	:2402 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:Bandedge	Engineer	:Czerny Lin
EUT Pol	:E2	Test Chamber	: 966D
Setting	:		



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dBuV	Factor dB	Actual FS dBuV/m	Limit dBuV/m	Margin dB
2382.53	Average	34.88	4.80	39.67	54.00	-14.33
2389.53	Peak	44.91	4.80	49.71	74.00	-24.29
2402.00	Peak	92.96	4.51	97.47	--	--
2402.00	Average	91.48	4.51	95.99	--	--
2494.58	Peak	44.62	4.59	49.21	74.00	-24.79
2497.33	Average	35.92	4.62	40.55	54.00	-13.45

Report No.: TMWK2307002436KR

Report Number	:TMWK2307002436KR	Test Date	:2023-08-30
Operation Band	:BLE 2M	Temp./Humi.	:25.3/56
Frequency	:2402 MHz	Antenna Pol.	:HORIZONTAL
Operation Mode	:Bandedge	Engineer	:Czerny Lin
EUT Pol	:E2	Test Chamber	: 966D
Setting	:		

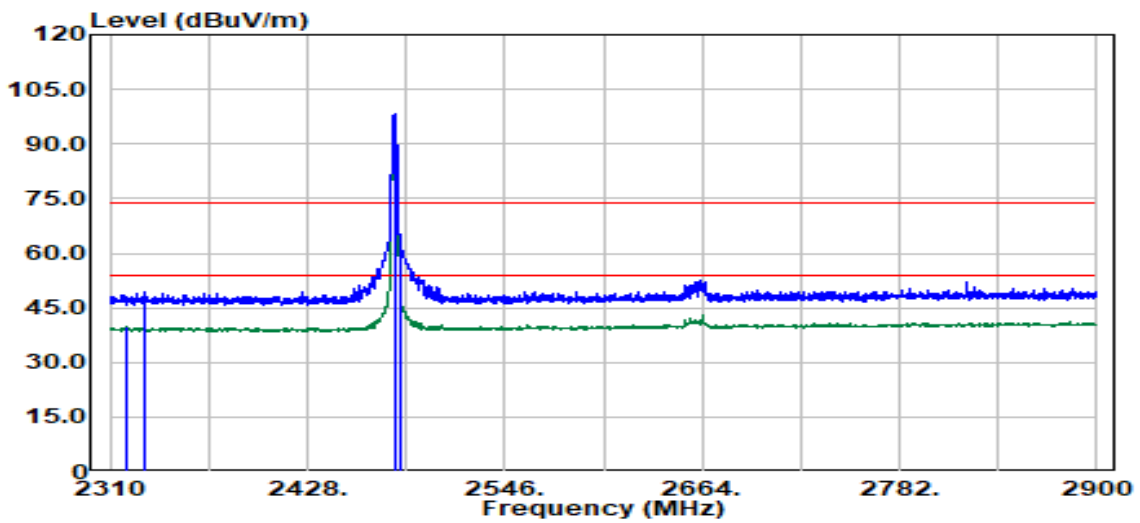


Trace: 1

Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dB $\mu$ V	Factor dB	Actual FS dB $\mu$ V/m	Limit dB $\mu$ V/m	Margin dB
2389.53	Average	36.19	4.80	40.99	54.00	-13.01
2389.78	Peak	47.68	4.80	52.49	74.00	-21.51
2402.00	Peak	92.74	4.51	97.25	--	--
2402.00	Average	90.26	4.51	94.77	--	--
2498.58	Average	34.81	4.64	39.45	54.00	-14.55
2499.33	Peak	43.62	4.64	48.26	74.00	-25.74

Report No.: TMWK2307002436KR

Report Number	:TMWK2307002436KR	Test Date	:2023-08-30
Operation Band	:BLE 2M	Temp./Humi.	:25.3/56
Frequency	:2480 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:Bandedge	Engineer	:Czerny Lin
EUT Pol	:E2	Test Chamber	: 966D
Setting	:		

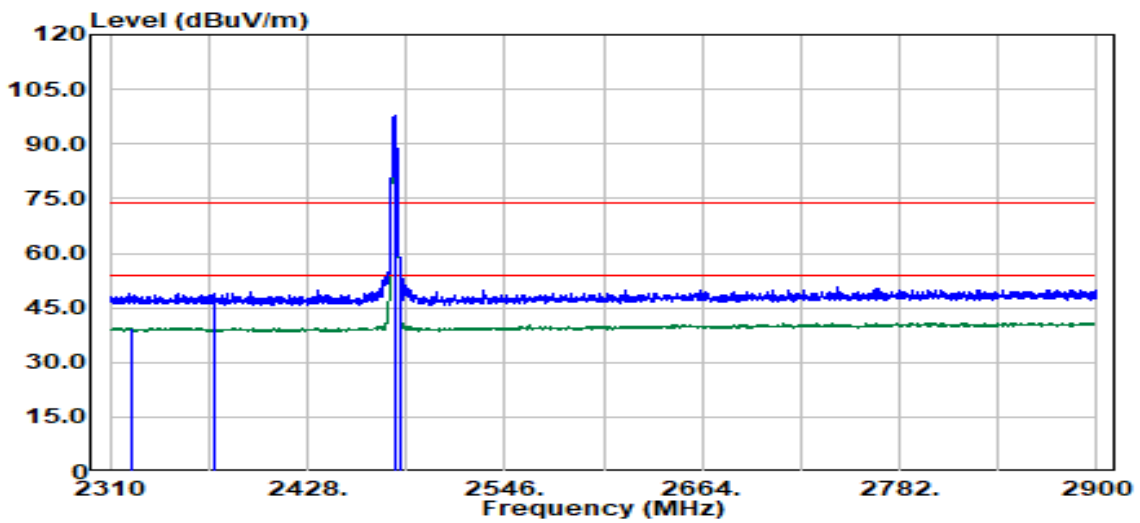


Trace: 1

Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dB $\mu$ V	Factor dB	Actual FS dB $\mu$ V/m	Limit dB $\mu$ V/m	Margin dB
2320.50	Average	35.33	4.66	39.98	54.00	-14.02
2331.01	Peak	44.58	4.67	49.26	74.00	-24.74
2480.00	Peak	93.42	4.65	98.06	--	--
2480.00	Average	92.22	4.65	96.87	--	--
2483.57	Peak	58.87	4.61	63.48	74.00	-10.52
2483.82	Average	42.62	4.61	47.23	54.00	-6.77

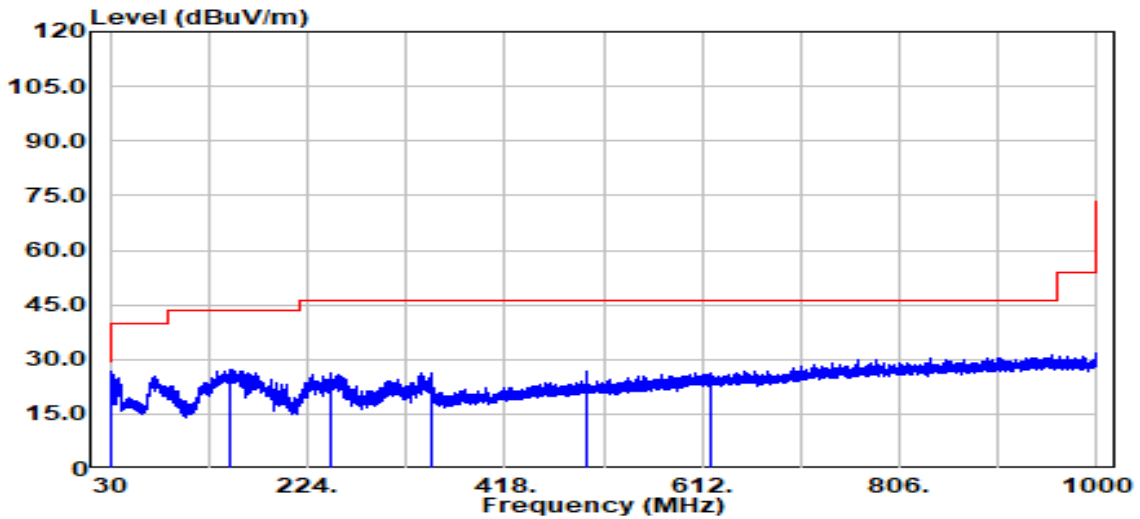
Report No.: TMWK2307002436KR

Report Number	:TMWK2307002436KR	Test Date	:2023-08-30
Operation Band	:BLE 2M	Temp./Humi.	:25.3/56
Frequency	:2480 MHz	Antenna Pol.	:HORIZONTAL
Operation Mode	:Bandedge	Engineer	:Czerny Lin
EUT Pol	:E2	Test Chamber	: 966D
Setting	:		



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dB $\mu$ V	Factor dB	Actual FS dB $\mu$ V/m	Limit dB $\mu$ V/m	Margin dB
2323.51	Average	34.95	4.66	39.61	54.00	-14.39
2371.78	Peak	44.30	4.71	49.02	74.00	-24.98
2480.00	Peak	93.12	4.65	97.77	--	--
2480.00	Average	91.57	4.65	96.21	--	--
2483.57	Peak	50.31	4.61	54.93	74.00	-19.07
2483.57	Average	41.56	4.61	46.17	54.00	-7.83

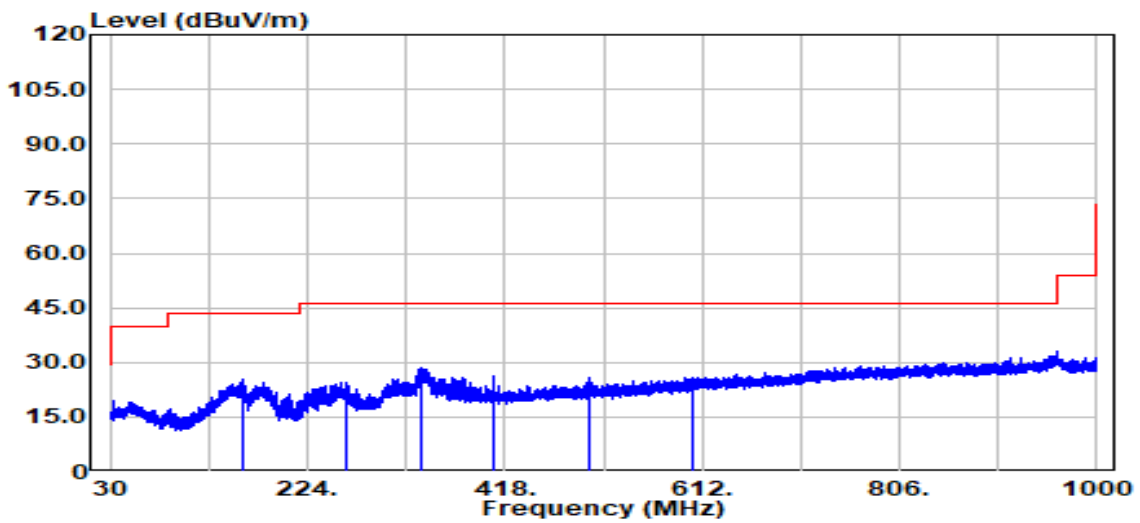
Report Number	:TMWK2307002436KR	Test Date	:2023-08-30
Operation Band	:BLE 2M	Temp./Humi.	:25.3/56
Frequency	:2480 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:TX	Engineer	:Czerny Lin
EUT Pol	:E2	Test Chamber	: 966D
Setting	:		



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dBμV	Factor dB	Actual FS dBμV/m	Limit dBμV/m	Margin dB
31.84	Peak	40.61	-14.11	26.50	40.00	-13.50
148.34	Peak	40.23	-13.06	27.17	43.50	-16.33
245.73	Peak	40.06	-14.01	26.05	46.00	-19.95
345.64	Peak	37.42	-11.18	26.24	46.00	-19.76
498.41	Peak	34.23	-7.56	26.67	46.00	-19.33
619.37	Peak	31.03	-4.63	26.40	46.00	-19.60

Report No.: TMWK2307002436KR

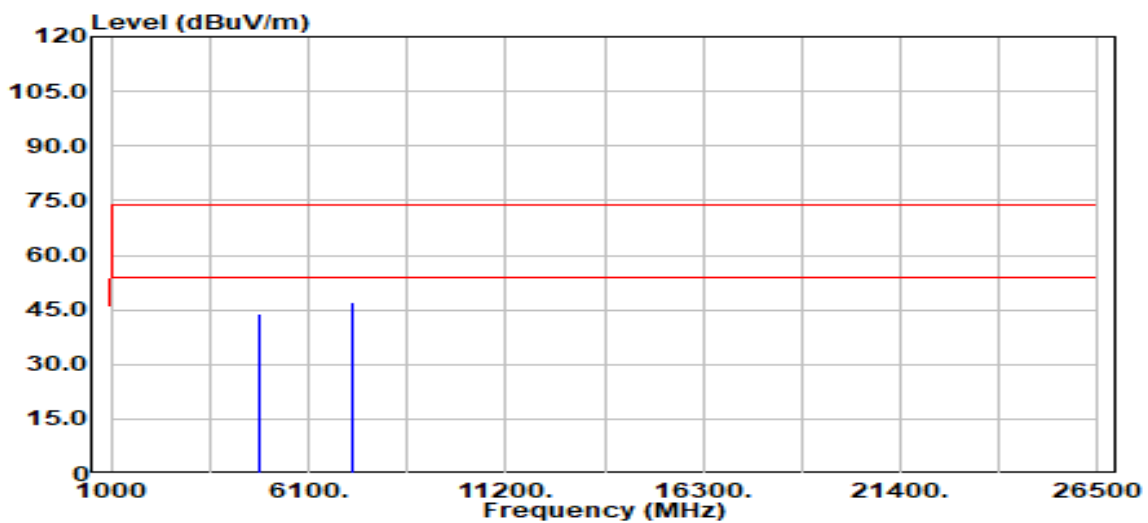
Report Number	:TMWK2307002436KR	Test Date	:2023-08-30
Operation Band	:BLE 2M	Temp./Humi.	:25.3/56
Frequency	:2480 MHz	Antenna Pol.	:HORIZONTAL
Operation Mode	:TX	Engineer	:Czerny Lin
EUT Pol	:E2	Test Chamber	: 966D
Setting	:		



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dB $\mu$ V	Factor dB	Actual FS dB $\mu$ V/m	Limit dB $\mu$ V/m	Margin dB
160.66	Peak	38.20	-12.90	25.30	43.50	-18.20
262.61	Peak	38.22	-13.56	24.66	46.00	-21.34
337.01	Peak	39.93	-11.22	28.72	46.00	-17.28
408.01	Peak	35.95	-9.59	26.37	46.00	-19.63
499.77	Peak	33.36	-7.53	25.83	46.00	-20.17
602.20	Peak	31.00	-4.97	26.04	46.00	-19.96

Report No.: TMWK2307002436KR

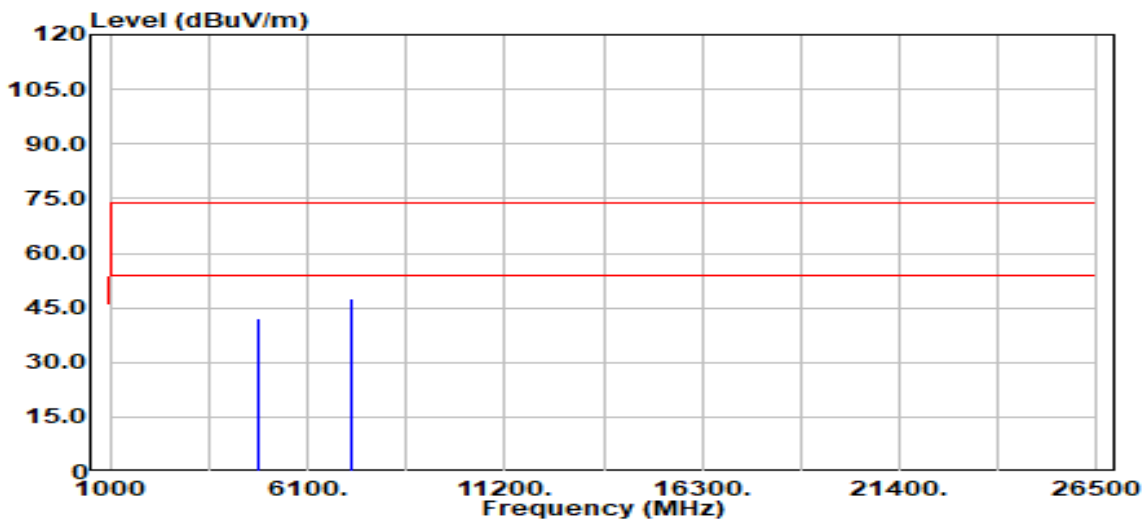
Report Number	:TMWK2307002436KR	Test Date	:2023-08-30
Operation Band	:BLE 1M	Temp./Humi.	:25.3/56
Frequency	:2402 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:TX	Engineer	:Czerny Lin
EUT Pol	:E2	Test Chamber	: 966D
Setting	:		



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dB $\mu$ V	Factor dB	Actual FS dB $\mu$ V/m	Limit dB $\mu$ V/m	Margin dB
4804.00	Peak	43.45	0.38	43.84	74.00	-30.16
4804.00	Average	34.64	0.38	35.03	54.00	-18.98
7206.00	Peak	41.84	5.33	47.17	74.00	-26.83
7206.00	Average	33.41	5.33	38.74	54.00	-15.26

Report No.: TMWK2307002436KR

Report Number	:TMWK2307002436KR	Test Date	:2023-08-30
Operation Band	:BLE 1M	Temp./Humi.	:25.3/56
Frequency	:2402 MHz	Antenna Pol.	:HORIZONTAL
Operation Mode	:TX	Engineer	:Czerny Lin
EUT Pol	:E2	Test Chamber	: 966D
Setting	:		

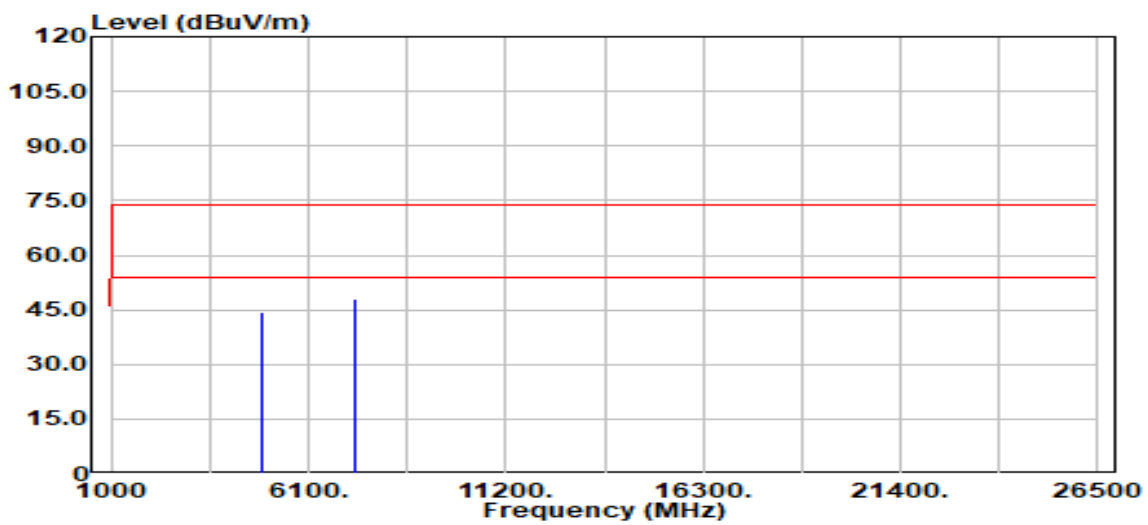


Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dB $\mu$ V	Factor dB	Actual FS dB $\mu$ V/m	Limit dB $\mu$ V/m	Margin dB
4804.00	Peak	41.73	0.38	42.11	74.00	-31.89
4804.00	Average	33.62	0.38	34.01	54.00	-20.00
7206.00	Peak	42.15	5.33	47.48	74.00	-26.52
7206.00	Average	33.43	5.33	38.76	54.00	-15.24



Report No.: TMWK2307002436KR

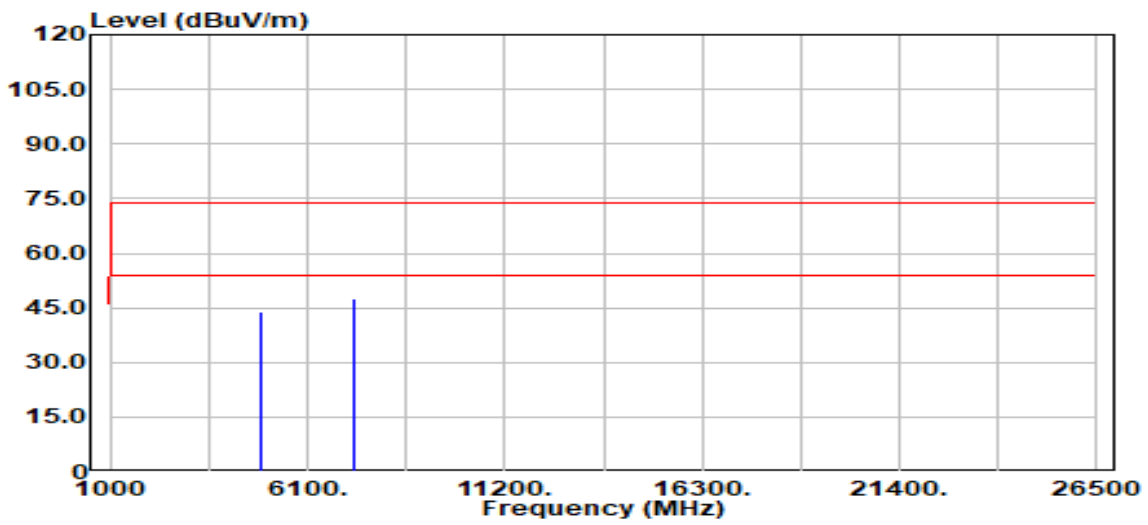
Report Number	:TMWK2307002436KR	Test Date	:2023-08-30
Operation Band	:BLE 1M	Temp./Humi.	:25.3/56
Frequency	:2442 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:TX	Engineer	:Czerny Lin
EUT Pol	:E2	Test Chamber	: 966D
Setting	:		



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dB $\mu$ V	Factor dB	Actual FS dB $\mu$ V/m	Limit dB $\mu$ V/m	Margin dB
4884.00	Peak	43.99	0.49	44.48	74.00	-29.52
4884.00	Average	33.78	0.49	34.27	54.00	-19.73
7326.00	Peak	42.38	5.48	47.86	74.00	-26.14
7326.00	Average	33.37	5.48	38.84	54.00	-15.16

Report No.: TMWK2307002436KR

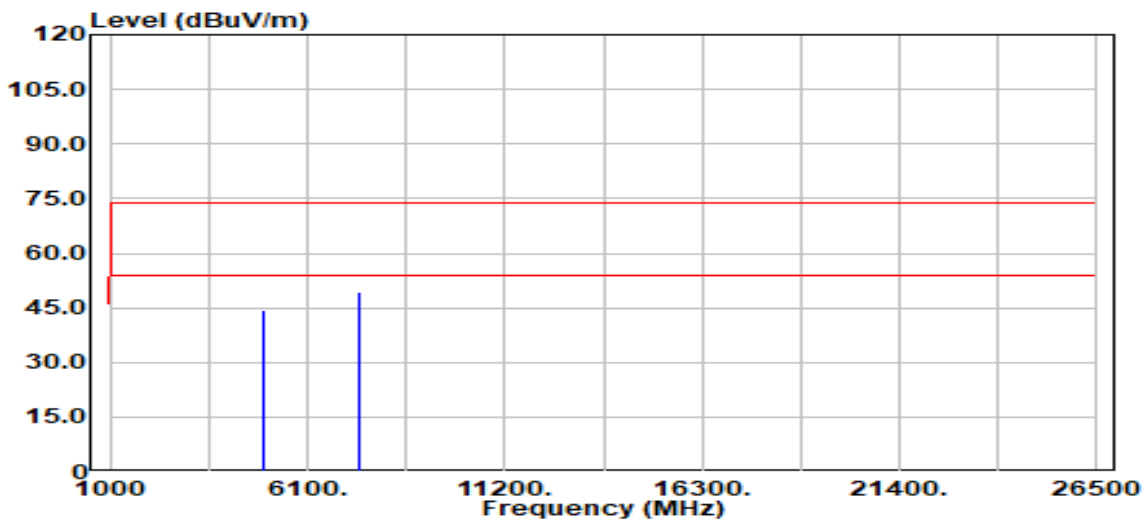
Report Number	:TMWK2307002436KR	Test Date	:2023-08-30
Operation Band	:BLE 1M	Temp./Humi.	:25.3/56
Frequency	:2442 MHz	Antenna Pol.	:HORIZONTAL
Operation Mode	:TX	Engineer	:Czerny Lin
EUT Pol	:E2	Test Chamber	: 966D
Setting	:		



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dB $\mu$ V	Factor dB	Actual FS dB $\mu$ V/m	Limit dB $\mu$ V/m	Margin dB
4884.00	Peak	43.25	0.49	43.74	74.00	-30.26
4884.00	Average	33.74	0.49	34.23	54.00	-19.77
7326.00	Peak	42.04	5.48	47.52	74.00	-26.48
7326.00	Average	33.22	5.48	38.69	54.00	-15.31

Report No.: TMWK2307002436KR

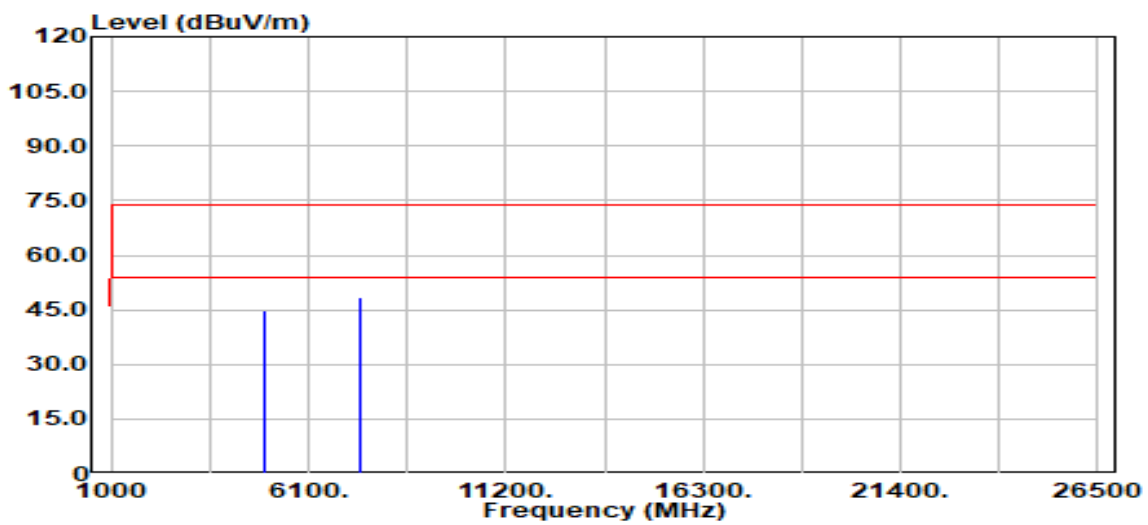
Report Number	:TMWK2307002436KR	Test Date	:2023-08-30
Operation Band	:BLE 1M	Temp./Humi.	:25.3/56
Frequency	:2480 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:TX	Engineer	:Czerny Lin
EUT Pol	:E2	Test Chamber	: 966D
Setting	:		



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dB $\mu$ V	Factor dB	Actual FS dB $\mu$ V/m	Limit dB $\mu$ V/m	Margin dB
4960.00	Peak	43.65	0.65	44.29	74.00	-29.71
4960.00	Average	33.77	0.65	34.41	54.00	-19.59
7440.00	Peak	43.68	5.56	49.24	74.00	-24.76
7440.00	Average	32.76	5.56	38.32	54.00	-15.68

Report No.: TMWK2307002436KR

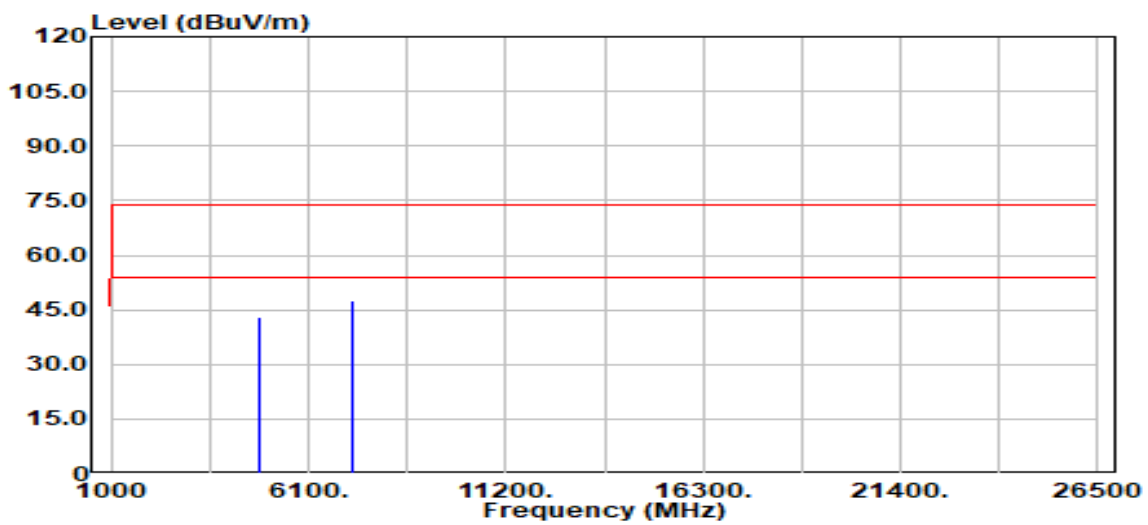
Report Number	:TMWK2307002436KR	Test Date	:2023-08-30
Operation Band	:BLE 1M	Temp./Humi.	:25.3/56
Frequency	:2480 MHz	Antenna Pol.	:HORIZONTAL
Operation Mode	:TX	Engineer	:Czerny Lin
EUT Pol	:E2	Test Chamber	: 966D
Setting	:		



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dB $\mu$ V	Factor dB	Actual FS dB $\mu$ V/m	Limit dB $\mu$ V/m	Margin dB
4960.00	Peak	43.97	0.65	44.62	74.00	-29.38
4960.00	Average	33.68	0.65	34.33	54.00	-19.67
7440.00	Peak	42.70	5.56	48.26	74.00	-25.74
7440.00	Average	32.75	5.56	38.31	54.00	-15.69

Report No.: TMWK2307002436KR

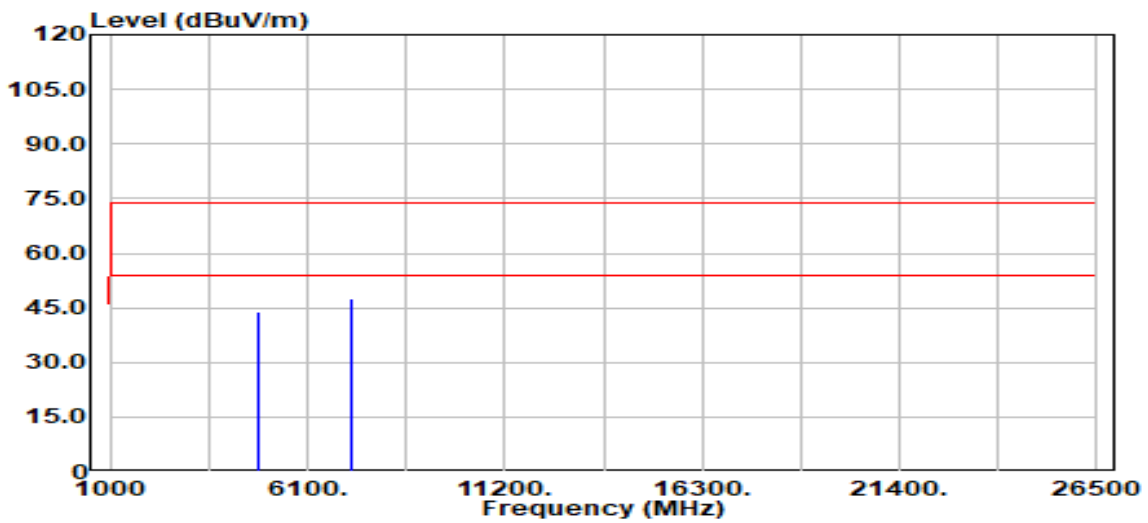
Report Number	:TMWK2307002436KR	Test Date	:2023-08-30
Operation Band	:BLE 2M	Temp./Humi.	:25.3/56
Frequency	:2402 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:TX	Engineer	:Czerny Lin
EUT Pol	:E2	Test Chamber	: 966D
Setting	:		



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dB $\mu$ V	Factor dB	Actual FS dB $\mu$ V/m	Limit dB $\mu$ V/m	Margin dB
4804.00	Peak	42.70	0.38	43.08	74.00	-30.92
4804.00	Average	34.85	0.38	35.23	54.00	-18.77
7206.00	Peak	42.34	5.33	47.67	74.00	-26.33
7206.00	Average	33.48	5.33	38.80	54.00	-15.20

Report No.: TMWK2307002436KR

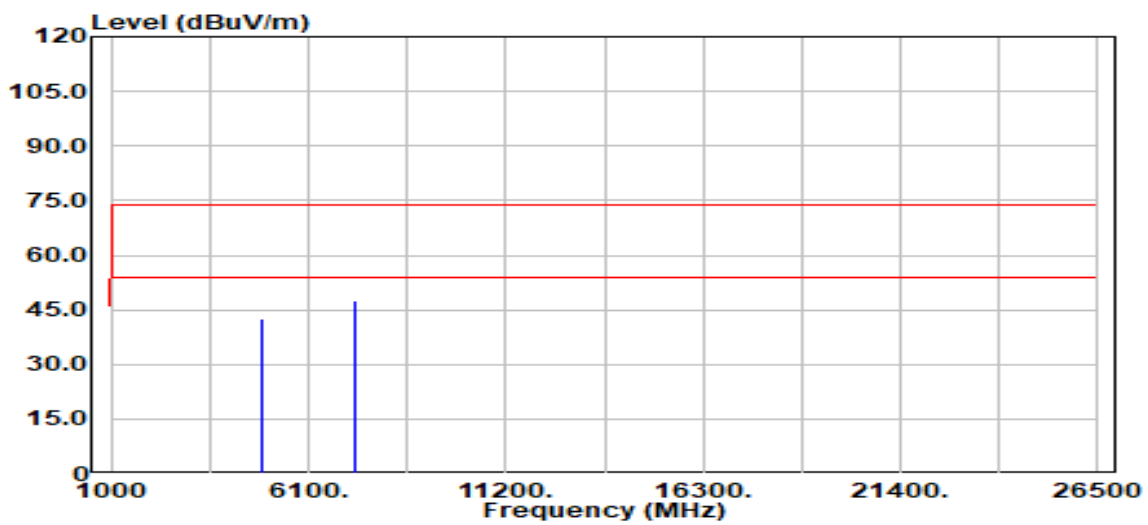
Report Number	:TMWK2307002436KR	Test Date	:2023-08-30
Operation Band	:BLE 2M	Temp./Humi.	:25.3/56
Frequency	:2402 MHz	Antenna Pol.	:HORIZONTAL
Operation Mode	:TX	Engineer	:Czerny Lin
EUT Pol	:E2	Test Chamber	: 966D
Setting	:		



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dB $\mu$ V	Factor dB	Actual FS dB $\mu$ V/m	Limit dB $\mu$ V/m	Margin dB
4804.00	Peak	43.67	0.38	44.05	74.00	-29.95
4804.00	Average	34.70	0.38	35.08	54.00	-18.92
7206.00	Peak	42.34	5.33	47.67	74.00	-26.33
7206.00	Average	33.59	5.33	38.92	54.00	-15.08

Report No.: TMWK2307002436KR

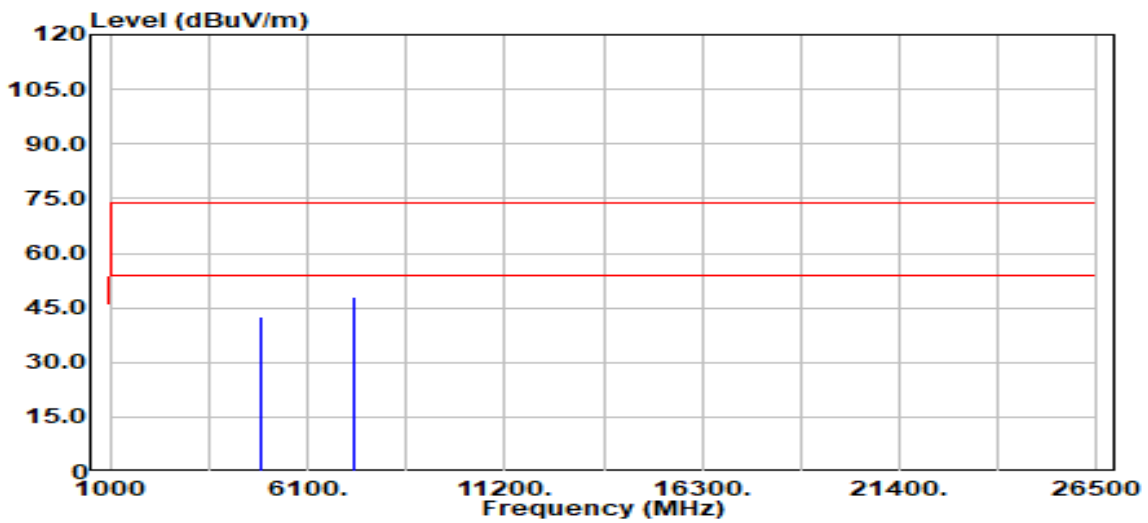
Report Number	:TMWK2307002436KR	Test Date	:2023-08-30
Operation Band	:BLE 2M	Temp./Humi.	:25.3/56
Frequency	:2442 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:TX	Engineer	:Czerny Lin
EUT Pol	:E2	Test Chamber	: 966D
Setting	:		



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dB $\mu$ V	Factor dB	Actual FS dB $\mu$ V/m	Limit dB $\mu$ V/m	Margin dB
4884.00	Peak	42.23	0.49	42.72	74.00	-31.28
4884.00	Average	34.69	0.49	35.18	54.00	-18.82
7326.00	Peak	42.19	5.48	47.67	74.00	-26.33
7326.00	Average	33.52	5.48	39.00	54.00	-15.00

Report No.: TMWK2307002436KR

Report Number	:TMWK2307002436KR	Test Date	:2023-08-30
Operation Band	:BLE 2M	Temp./Humi.	:25.3/56
Frequency	:2442 MHz	Antenna Pol.	:HORIZONTAL
Operation Mode	:TX	Engineer	:Czerny Lin
EUT Pol	:E2	Test Chamber	: 966D
Setting	:		

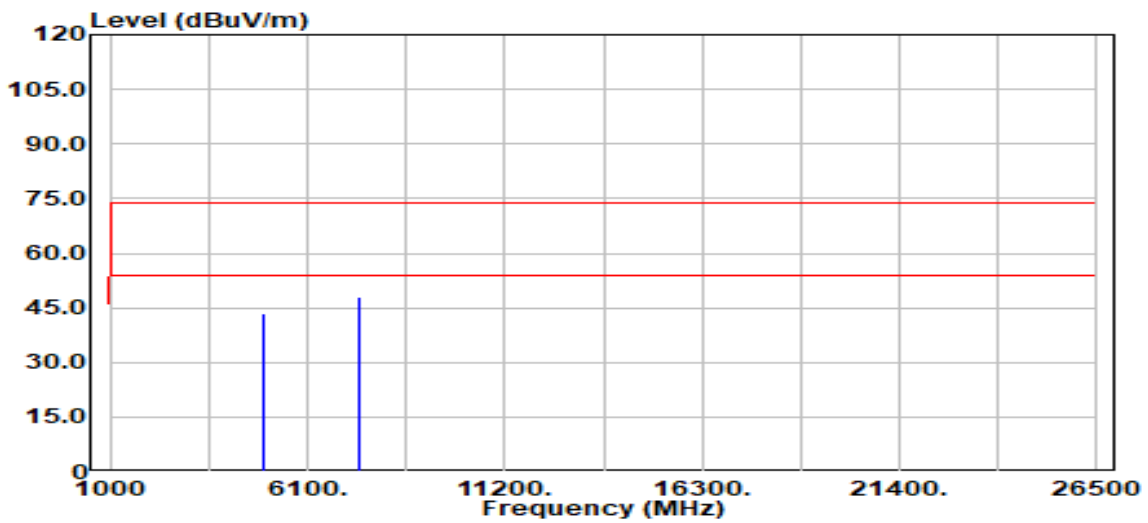


Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dB $\mu$ V	Factor dB	Actual FS dB $\mu$ V/m	Limit dB $\mu$ V/m	Margin dB
4884.00	Peak	42.15	0.49	42.65	74.00	-31.35
4884.00	Average	34.61	0.49	35.10	54.00	-18.90
7326.00	Peak	42.59	5.48	48.07	74.00	-25.93
7326.00	Average	33.36	5.48	38.84	54.00	-15.16



Report No.: TMWK2307002436KR

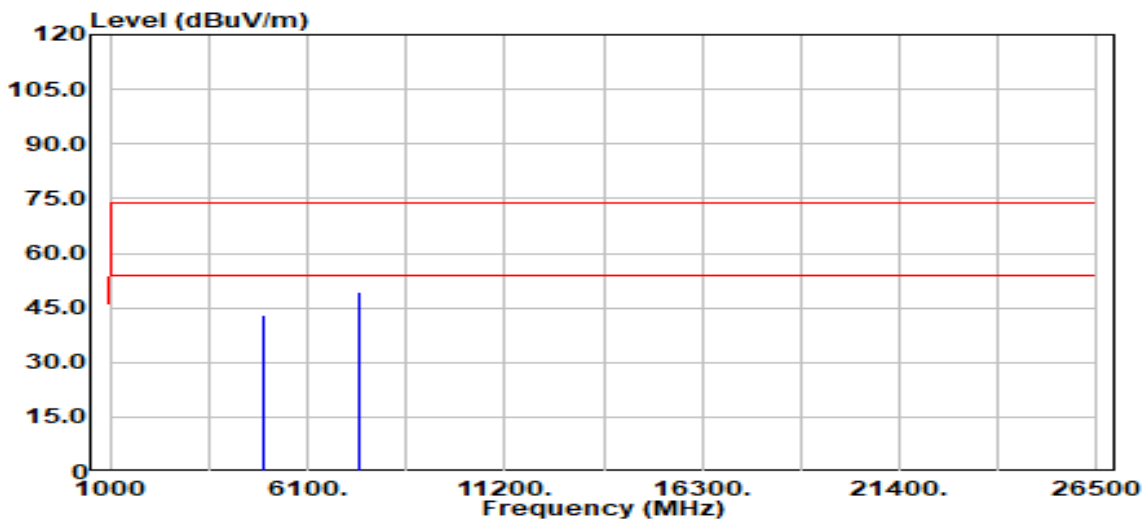
Report Number	:TMWK2307002436KR	Test Date	:2023-08-30
Operation Band	:BLE 2M	Temp./Humi.	:25.3/56
Frequency	:2480 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:TX	Engineer	:Czerny Lin
EUT Pol	:E2	Test Chamber	: 966D
Setting	:		



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dB $\mu$ V	Factor dB	Actual FS dB $\mu$ V/m	Limit dB $\mu$ V/m	Margin dB
4960.00	Peak	42.67	0.65	43.31	74.00	-30.69
4960.00	Average	34.56	0.65	35.21	54.00	-18.79
7440.00	Peak	42.23	5.56	47.80	74.00	-26.20
7440.00	Average	33.85	5.56	39.42	54.00	-14.58

Report No.: TMWK2307002436KR

Report Number	:TMWK2307002436KR	Test Date	:2023-08-30
Operation Band	:BLE 2M	Temp./Humi.	:25.3/56
Frequency	:2480 MHz	Antenna Pol.	:HORIZONTAL
Operation Mode	:TX	Engineer	:Czerny Lin
EUT Pol	:E2	Test Chamber	: 966D
Setting	:		



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dB $\mu$ V	Factor dB	Actual FS dB $\mu$ V/m	Limit dB $\mu$ V/m	Margin dB
4960.00	Peak	42.56	0.65	43.20	74.00	-30.80
4960.00	Average	34.62	0.65	35.27	54.00	-18.73
7440.00	Peak	43.74	5.56	49.30	74.00	-24.70
7440.00	Average	33.51	5.56	39.07	54.00	-14.93

**- End of Test Report -**