



Report No.: TMWK2406002059KR Rev.: 03

RADIO TEST REPORT FCC 47 CFR PART 15 SUBPART C

Test Standard FCC Part 15.247

Product name Triple source to BT5.3 LE Audio Transmitter

Brand Name CC&C

Model No. BA-550T

Test Result Pass

Statements of Determination of compliance is based on the results of Conformity 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: 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:

sehni. Hu

Sehni Hu 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-2406000277P Page: 2 / 58
Report No.: TMWK2406002059KR Rev.: 03

Revision History

Rev.	Issue Date	Revisions	Effect Page	Revised By
00	August 8, 2024	Initial Issue	ALL	Peggy Tsai
01	August 23, 2024	See the following Note Rev. (01)	P.4, 5, 9, 10	Peggy Tsai
02	September 10, 2024	See the following Note Rev. (02)	P.4	Peggy Tsai
03	September 25, 2024	See the following Note Rev. (03)	P.5	Peggy Tsai

Note:

Rev. (01)

1. Modify power operation in section 1.1.

- 2. Modify antenna information in section 1.3.
- 3. Modify support and EUT accessories equipment in section 1.7.
- 4. Modify test set up diagram in section 1.8.
- 5. Modify test program in section 1.9.

Rev. (02)

1. Added EUT Serial # in section 1.1.

Rev. (03)

1. Modify Antenna Type in section 1.3.



Project No: TM-2406000277P Report No.: TMWK2406002059KR

Table of contents

Page: 3 / 58

Rev.: 03

1.	GENERAL INFORMATION	4
1.1	EUT INFORMATION	4
1.2	EUT CHANNEL INFORMATION	5
1.3	ANTENNA INFORMATION	5
1.4	MEASUREMENT UNCERTAINTY	6
1.5	FACILITIES AND TEST LOCATION	6
1.6	INSTRUMENT CALIBRATION	7
1.7	SUPPORT AND EUT ACCESSORIES EQUIPMENT	9
1.8	TEST SET UP DIAGRAM	10
1.9	TEST PROGRAM	10
1.10	TEST METHODOLOGY AND APPLIED STANDARDS	10
2.	TEST SUMMERY	11
3.	DESCRIPTION OF TEST MODES	12
3.1	THE WORST MODE OF OPERATING CONDITION	12
3.2	THE WORST MODE OF MEASUREMENT	13
3.3	EUT DUTY CYCLE	14
4.	TEST RESULT	15
4.1	AC POWER LINE CONDUCTED EMISSION	15
4.2	6DB BANDWIDTH AND OCCUPIED BANDWIDTH(99%)	18
4.3	OUTPUT POWER MEASUREMENT	23
4.4	POWER SPECTRAL DENSITY	26
4.5	CONDUCTED BAND EDGE AND SPURIOUS EMISSION	29
4.6	RADIATION BANDEDGE AND SPURIOUS EMISSION	33
APPE	ENDIX A - PHOTOGRAPHS OF EUT	



 Project No:
 TM-2406000277P
 Page:
 4 / 58

 Report No.:
 TMWK2406002059KR
 Rev.:
 03

1. GENERAL INFORMATION

1.1 EUT INFORMATION

Applicant	CC&C Technologies, Inc. 8F, No.150, Jian Yi Rd, Zhonghe District, New Taipei City, 235, Taiwan
Manufacturer	CC&C Technologies, Inc. 8F, No.150, Jian Yi Rd, Zhonghe District, New Taipei City, 235, Taiwan
Equipment	Triple source to BT5.3 LE Audio Transmitter
Model No.	BA-550T
Model Discrepancy	N/A
Trade Name	CC&C
Received Date	June 28, 2024
Date of Test	July 16 ~ 26, 2024
Power Operation	 Powered from Host System: DC 5V Powered from Battery: DC 3.7V, 250mAh, 0.93Wh (Model No.: 502030)
EUT Serial #	Radiated: 000272F14FD1 BA-550T Conducted: 000272F14FD2 BA-550T
HW Version	0A
FW 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.



 Project No:
 TM-2406000277P
 Page:
 5 / 58

 Report No.:
 TMWK2406002059KR
 Rev.:
 03

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 Number of Location in frequency which device operates frequencies 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 Type	☐ PIFA ☐ PCB ☐ Dipole ☒ embedded antenna
Antenna Gain	Gain: 3.2 dBi
Antenna Trade / Model	LYNwave / ALA120-051026-00
Antenna Connector	IPEX

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.



Project No: TM-2406000277P Page: 6 / 58 Report No.: TMWK2406002059KR Rev.: 03

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	± 3.761 dB
Radiated Emission_30MHz-200MHz	± 3.473 dB
Radiated Emission_200MHz-1GHz	± 3.946 dB
Radiated Emission_1GHz-6GHz	± 4.797 dB
Radiated Emission_6GHz-18GHz	± 4.803 dB
Radiated Emission_18GHz-26GHz	± 3.459 dB
Radiated Emission_26GHz-40GHz	± 3.297 dB

Remark:

1.5 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	Ben Yang	-
Radiation	Tony Chao ⋅ Ray Li	-
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.} 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.



 Project No:
 TM-2406000277P
 Page:
 7 / 58

 Report No.:
 TMWK2406002059KR
 Rev.:
 03

1.6 INSTRUMENT CALIBRATION

Conducted_FCC/NCC/IC(All)							
Name of Equipment	Manufacturer	Model	Serial Number	Calibration Date	Calibration Due		
Power Sensor	Anritsu	MA2411B	1726104	2024-04-16	2025-04-15		
Power Sensor	Anritsu	MA2412B	1726107	2024-04-16	2025-04-15		
Power Meter	Anritsu	ML2496A	1804001	2024-04-16	2025-04-15		
EXA Signal Analyzer	Keysight	N9010B	MY55460167	2024-01-03	2025-01-02		
Software	Radio Test Software Ver. 21						

966A_Radiated						
Name of Equipment	Manufacturer	Model	Serial Number	Calibration Date	Calibration Due	
Signal Analyzer	KEYSIGHT	N9010A	MY52220817	2024-03-15	2025-03-14	
Thermo-Hygro Meter	WISEWIND	1206	D07	2023-12-08	2024-12-07	
Active Loop Antenna	SCHWARZBEC K	FMZB 1513-60	1513-60-028	2023-12-13	2024-12-12	
Bi-Log Antenna	Sunol Sciences	JB3	A030105	2024-07-12	2025-07-11	
Preamplifier	EMEC	EM330	060609	2024-02-21	2025-02-20	
Cable	Huber+Suhner	104PEA	20995+21000+ 182330	2024-02-21	2025-02-20	
Horn Antenna	ETC	MCTD 1209	DRH13M02003	2023-12-28	2024-12-27	
Preamplifier	HP	8449B	3008A00965	2023-12-22	2024-12-21	
Cable	EMCI	EMC101G	221213+221011 +221012	2023-10-17	2024-10-16	
Attenuator	Mini-Circuits	BW-S9W5	BWS9W5-09- 966A-01	2024-02-07	2025-02-06	
High Pass Filters	Titan Microwave	T04H30001800 070S01	22011402-4	2024-06-12	2025-06-13	
Horn Antenna	SCHWARZBEC K	BBHA9170	1047	2023-12-13	2024-12-12	
Pre-Amplifier	EMCI	EMC184045SE	980860	2023-12-12	2024-12-11	
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.



Project No: TM-2406000277P Page: 8 / 58 Report No.: TMWK2406002059KR Rev.: 03

AC Mains Conduction							
Name of Equipment	Manufacturer	Model	Serial Number	Calibration Date	Calibration Due		
EMI Test Receiver	R&S	ESCI	100064	2024-06-14	2025-06-13		
LISN	TESEQ	LN2-16N	22012	2024-02-29	2025-02-27		
Cable	Woken	SFL402	185A	2024-07-08	2025-07-07		
Software	e3 V6-110812						

Remark:

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



 Project No:
 TM-2406000277P
 Page:
 9 / 58

 Report No.:
 TMWK2406002059KR
 Rev.:
 03

1.7 SUPPORT AND EUT ACCESSORIES EQUIPMENT

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

	Support Equipment (Conducted)							
No.	No. Equipment Brand Model Series No. FCC							
1	NB(B)	Lenovo	T470	N/A	N/A			
Α	Type-C Cable	Dong Guan YCD Electronic Co., ltd	37G1E6300-00	N/A	N/A			
В	4 PIN Test Kit	CC&C	BA-550T TEST BOARD	N/A	N/A			

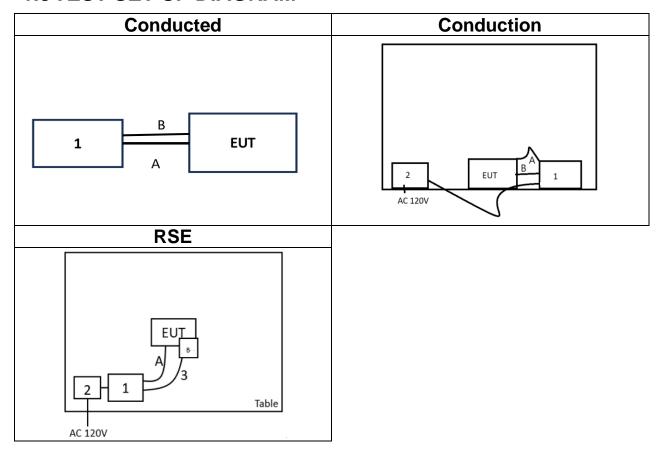
	Support Equipment (Conduction)							
No.	Equipment	Series No.	FCC ID					
1	NB(D)	Lenovo	ThinkPad X260	N/A	N/A			
2	Adapter	Lenovo	ADLX45DLC3A	N/A	N/A			
А	Type-C Cable	e Dong Guan YCD Electronic Co., ltd 37G1E6300-		N/A	N/A			
В	4 PIN Test Kit	CC&C	BA-550T TEST BOARD	N/A	N/A			

	Support Equipment (RSE)							
No.	o. Equipment Brand Model				FCC ID			
1	NB(D)	Lenovo	ThinkPad X260	N/A	N/A			
2	Adapter	Lenovo	ADLX45DLC3A	N/A	N/A			
3	USB Cable	DTAudio	8024025	N/A	N/A			
Α	Type-C Cable	Dong Guan YCD Electronic Co., ltd	37G1E6300-00	N/A	N/A			
В	4 PIN Test Kit	CC&C	BA-550T TEST BOARD	N/A	N/A			



Project No: TM-2406000277P Page: 10 / 58 Report No.: TMWK2406002059KR Rev.: 03

1.8 TEST SET UP DIAGRAM



1.9 TEST PROGRAM

The EUT connection corresponds to the surrounding fixture control board. This EUT uses "BlueTest3" software to set the frequency, modulation, and power to allow the sample to continuously transmit.

1.10 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.



 Project No:
 TM-2406000277P
 Page:
 11 / 58

 Report No.:
 TMWK2406002059KR
 Rev.:
 03

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) 15.205, 15.209	4.6	Radiation Band Edge	Pass
15.247(d) 15.205, 15.209	4.6	Radiation Spurious Emission	Pass



Project No: TM-2406000277P Page: 12 / 58

Report No.: TMWK2406002059KR Rev.: 03

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.



Project No: TM-2406000277P Page: 13 / 58 Report No.: TMWK2406002059KR Rev.: 03

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 Host System				
Worst Mode					
Ra	diated Emission Measurement Above 1G				
Test Condition Radiated Emission Above 1G					
Power supply Mode	Mode 1: EUT power by Host System				
Worst Mode					
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) 				
Ra	diated 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(Z-Plane) were recorded in this report.



 Project No:
 TM-2406000277P
 Page:
 14 / 58

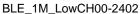
 Report No.:
 TMWK2406002059KR
 Rev.:
 03

3.3 EUT DUTY CYCLE

Temperature: 23.1°C Test date: July 16, 2024

Humidity: 55% RH Tested by: Marco Chan

	Duty Cycle (%) = Ton / (Ton+Toff)	Duty Factor (dB) =10*log (1/Duty Cycle)	1/T (kHz)	VBW setting (kHz)
BLE 1M	100.00	0.00	0.00	0.01
BLE 2M	100.00	0.00	0.00	0.01





BLE_2M_LowCH00-2402





Project No: TM-2406000277P Page: 15 / 58 Report No.: TMWK2406002059KR Rev.: 03

4. TEST RESULT

4.1 AC POWER LINE CONDUCTED EMISSION

4.1.1 Test Limit

According to §15.207(a),

Frequency Range	Limits(dBµV)		
(MHz)	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	

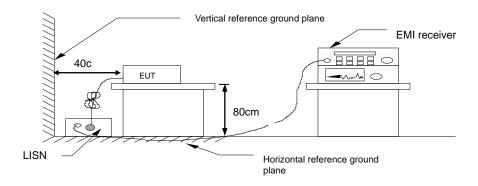
^{*} Decreases with the logarithm of the frequency.

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.
- 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





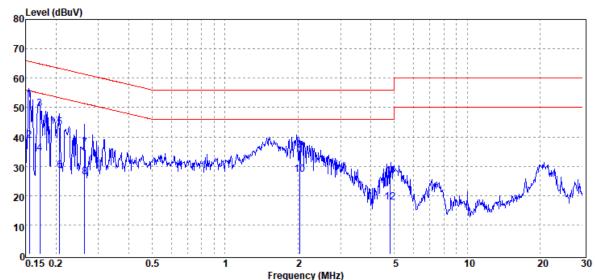
Project No: TM-2406000277P Page: 16 / 58 Report No.: TMWK2406002059KR Rev.: 03

4.1.4 Test Result

Project No : TM-2406000277P Test Date : 2024-07-23
Operation Mode : BLE Temp./Humi. : 23.4°C / 54%
Test Chamber : Conduction Engineer : Ben Yang

Probe : LINE Test Voltage : AC 120V/60Hz

Note :



	requestey (minz)					
Freq.	Detector Mode	Spectrum Read Level	Factor	Actual FS	Limit	Margin
MHz	PK/QP/AV	dΒμV	dB	dΒμV	dΒμV	dB
0.156	QP	52.47	0.15	52.62	65.70	-13.08
0.156	Average	38.63	0.15	38.78	55.70	-16.92
0.172	QP	49.28	0.25	49.53	64.88	-15.35
0.172	Average	34.01	0.25	34.26	54.88	-20.62
0.207	QP	42.70	0.39	43.09	63.32	-20.23
0.207	Average	28.23	0.39	28.62	53.32	-24.70
0.263	QP	36.00	0.39	36.39	61.34	-24.95
0.263	Average	25.92	0.39	26.31	51.34	-25.03
2.028	QP	35.22	0.18	35.40	56.00	-20.60
2.028	Average	26.99	0.18	27.17	46.00	-18.83
4.814	QP	26.24	0.26	26.50	56.00	-29.50
4.814	Average	17.57	0.26	17.83	46.00	-28.17

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

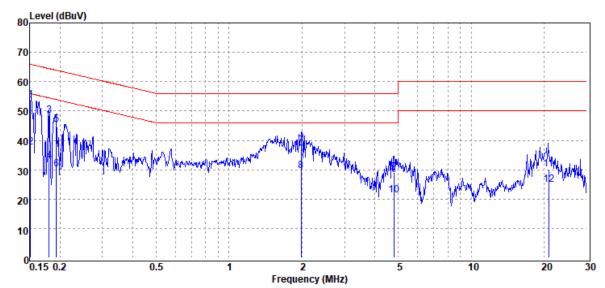
Note: 2. Margin= Actual FS - Limit



Project No: TM-2406000277P Page: 17 / 58 Report No.: TMWK2406002059KR Rev.: 03

Project No Test Date : TM-2406000277P : 2024-07-23 Operation Mode : BLE Temp./Humi. : 23.4°C / 54% : Ben Yang Test Chamber Engineer : Conduction Probe : NEUTRAL Test Voltage : AC 120V/60Hz

Note :



Freq.	Detector Mode	Spectrum Read Level	Factor	Actual FS	Limit	Margin
MHz	PK/QP/AV	dBµV	dB	dΒμV	dΒμV	dB
0.152	QP	53.60	0.11	53.71	65.91	-12.20
0.152	Average	37.52	0.11	37.63	55.91	-18.28
0.180	QP	48.09	0.27	48.36	64.47	-16.11
0.180	Average	32.70	0.27	32.97	54.47	-21.50
0.194	QP	45.02	0.33	45.35	63.87	-18.52
0.194	Average	29.86	0.33	30.19	53.87	-23.68
1.983	QP	37.92	0.16	38.08	56.00	-17.92
1.983	Average	29.40	0.16	29.56	46.00	-16.44
4.791	QP	28.84	0.23	29.07	56.00	-26.93
4.791	Average	21.08	0.23	21.31	46.00	-24.69
20.894	QP	29.67	0.46	30.13	60.00	-29.87
20.894	Average	24.53	0.46	24.99	50.00	-25.01

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

Note: 2. Margin= Actual FS - Limit



Project No: TM-2406000277P Page: 18 / 58 Report No.: TMWK2406002059KR Rev.: 03

4.26dB 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.
- 4. SA set RBW = 1% ~ 5% OBW, VBW = three times the RBW and Detector = Peak, to measurement 99% Bandwidth
- 5. Measure and record the result of 6 dB Bandwidth and 99% Bandwidth. in the test report.

4.2.3 Test Setup

Refer to section 1.8.



 Project No:
 TM-2406000277P
 Page:
 19 / 58

 Report No.:
 TMWK2406002059KR
 Rev.:
 03

4.2.4 Test Result

Temperature: 23.1°C Test date: July 16, 2024

Humidity: 55% RH **Tested by:** Marco Chan

6dB BANDWIDTH

BLE 1M mode

Frequency (MHz)	6dB BW (MHz)	Required BW (MHz)	Result
2402	0.7360	≥ 0.5	PASS
2442	0.7372	≥ 0.5	PASS
2480	0.7321	≥ 0.5	PASS

BLE 2M mode

Frequency (MHz)	6dB BW (MHz)	Required BW (MHz)	Result
2402	1.485	≥ 0.5	PASS
2442	1.491	≥ 0.5	PASS
2480	1.441	≥ 0.5	PASS



 Project No:
 TM-2406000277P
 Page:
 20 / 58

 Report No.:
 TMWK2406002059KR
 Rev.:
 03

BANDWIDTH 99%

BLE 1M mode

Frequency (MHz)	99%Bandwidth (MHz)
2402	1.0612
2442	1.0548
2480	1.0564

BLE 2M mode

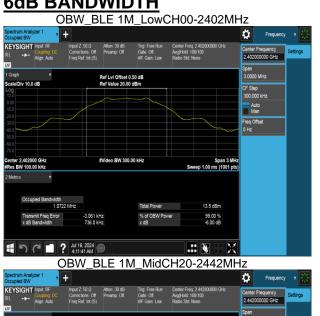
Frequency (MHz)	99%Bandwidth (MHz)
2402	2.1004
2442	2.0986
2480	2.1010

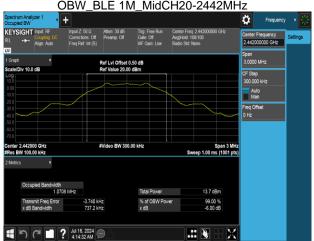


Project No: TM-2406000277P Page: 21 / 58 Report No.: TMWK2406002059KR Rev.:

Test Data

6dB BANDWIDTH







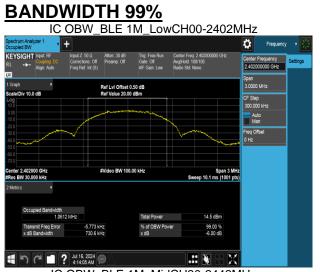








Project No: TM-2406000277P Page: 22 / 58 Report No.: TMWK2406002059KR Rev.: 03









... 😲 😐







Project No: TM-2406000277P Page: 23 / 58

Report No.: TMWK2406002059KR Rev.: 03

4.3 OUTPUT POWER MEASUREMENT

4.3.1 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.

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

Refer to section 1.8.



Project No: TM-2406000277P Page: 24 / 58

Report No.: TMWK2406002059KR Rev.: 03

4.3.4 Test Result

Temperature: 23.1°C Test date: July 16, 2024

Humidity: 55% RH **Tested by:** Marco Chan

Peak & Average output power:

BLE 1M mode:

СН	Frequency (MHz)	Power Setting	Peak Output Power (dBm)	Required Limit (dBm)
Low	2402	11	6.78	30
Mid	2442	11	6.65	30
High	2480	11	6.65	30
СН	Frequency (MHz)	Power Setting	Avg. Output Power (dBm)	Required Limit (dBm)
Low	2402	11	6.65	30
Mid	2442	11	6.55	30
High	2480	11	6.54	30

^{*}Note:

^{1.}Measured by power meter, cable loss 0.5 dB + Duty cycle factor has been offseted to the power meter for Avg. power and cable loss has been offseted for Peak power measurement.



Project No: TM-2406000277P Page: 25 / 58

Report No.: TMWK2406002059KR Rev.: 03

BLE 2M mode:

СН	Frequency (MHz)	Power set	Peak Output Power (dBm)	Required Limit (dBm)
Low	2402	11	6.78	30
Mid	2442	11	6.66	30
High	2480	11	6.64	30
СН	Frequency (MHz)	Power set	Avg. Output Power (dBm)	Required Limit (dBm)
Low	2402	11	6.64	30
Mid	2442	11	6.54	30

^{*}Note:

^{1.}Measured by power meter, cable loss 0.5 dB + Duty cycle factor has been offseted to the power meter for Avg. power and cable loss has been offseted for Peak power measurement.



Project No: TM-2406000277P Page: 26 / 58 Report No.: TMWK2406002059KR Rev.: 03

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	 ✓ Antenna not exceed 6 dBi : 8dBm ✓ Antenna with DG greater than 6 dBi [Limit = 8 - (DG - 6)] ✓ 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 = 10kHz, 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

Refer to section 1.8.



 Project No:
 TM-2406000277P
 Page:
 27 / 58

 Report No.:
 TMWK2406002059KR
 Rev.:
 03

4.4.4 Test Result

Temperature: 23.1° C **Test date:** July 16, 2024

Humidity: 55% RH **Tested by:** Marco Chan

BLE 1M mode

Frequency (MHz)	RF Power Density (dBm/3kHz)	Maximum Limit (dBm/3kHz)	Result
2402	-5.68	8	PASS
2442	-5.22	8	PASS
2480	-5.94	8	PASS

^{*}Note:

BLE 2M mode

Frequency (MHz)	RF Power Density (dBm/3kHz)	Maximum Limit (dBm/3kHz)	Result
2402	-8.73	8	PASS
2442	-8.67	8	PASS
2480	-7.79	8	PASS

^{*}Note:

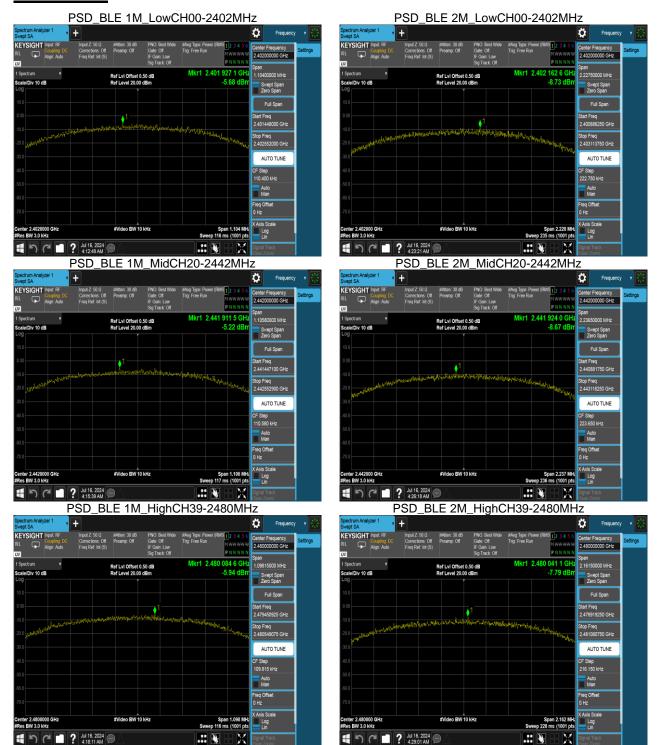
1.cable loss as 0.5dB that offsets in the spectrum

^{1.}cable loss as 0.5dB that offsets in the spectrum



Project No: TM-2406000277P Page: 28 / 58 Report No.: TMWK2406002059KR Rev.: 03

Test Data





Project No: TM-2406000277P Page: 29 / 58

Report No.: TMWK2406002059KR Rev.: 03

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

Refer to section 1.8.

4.5.4 Test Result

Temperature: 23.1° C Test date: July 16, 2024

Humidity: 55% RH **Tested by:** Marco Chan



Project No: TM-2406000277P Page: 30 / 58 Report No.: TMWK2406002059KR Rev.: 03

Test Data

Reference Level















Project No: TM-2406000277P Page: 31 / 58 Report No.: TMWK2406002059KR Rev.: 03

1 5 C 7 Jul 16, 2024 9



#Video BW 300 kHz

.:: 🔖

Band Edge_BLE 1M_HighCH39-2480MHz





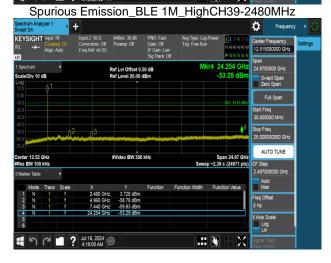


Project No: TM-2406000277P Page: 32 / 58 Report No.: TMWK2406002059KR Rev.: 03

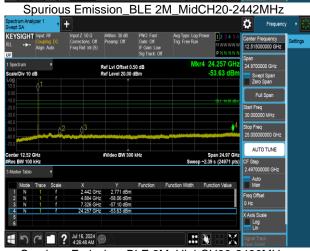
Spurious Emission















Project No: TM-2406000277P Page: 33 / 58 Report No.: TMWK2406002059KR Rev.: 03

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	Field Strength microvolts/m at 3 metres (watts, e.i.r.p.)	
(MHz)	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 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.



Project No: TM-2406000277P Page: 34 / 58

Report No.: TMWK2406002059KR Rev.: 03

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.
- 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*RBW, Sweep = Auto,

Detector = Peak, Trace = Max hold.

- (3) Above 1GHz:
 - (3.1) For Peak measurement : RBW = 1MHz, VBW ≥ 3 RBW, Sweep = Auto, Detector = Peak, Trace = Max hold.
 - (3.2) For Average measurement : RBW = 1MHz, VBW

If Duty Cycle ≥ 98%, VBW=10Hz.

If Duty Cycle < 98%, VBW=1/T.

6. Data result:

Actual FS=Spectrum Reading Level + Factor Margin=Actual FS- Limit

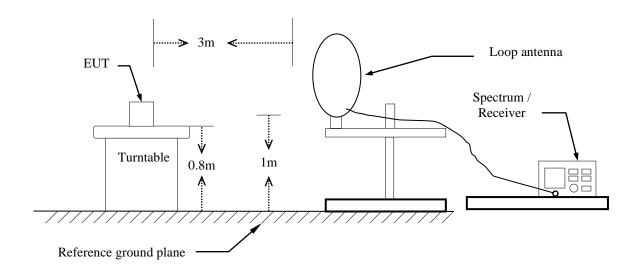


 Project No:
 TM-2406000277P
 Page:
 35 / 58

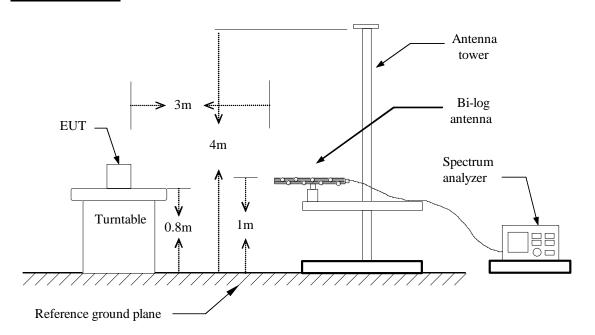
 Report No.:
 TMWK2406002059KR
 Rev.:
 03

4.6.3 Test Setup

9kHz ~ 30MHz



30MHz ~ 1GHz

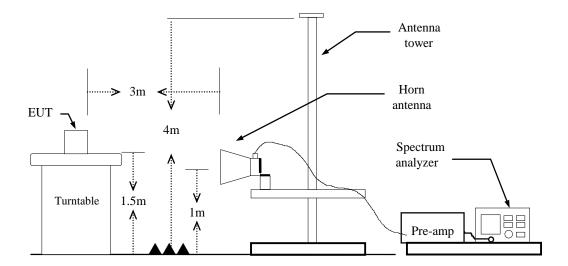




Project No: TM-2406000277P Page: 36 / 58

Report No.: TMWK2406002059KR Rev.: 03

Above 1 GHz



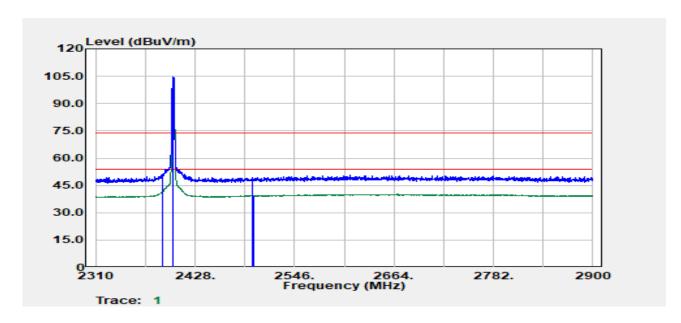


Project No: TM-2406000277P Page: 37 / 58 Report No.: TMWK2406002059KR Rev.: 03

4.6.4 Test Result

Band Edge Test Data

Project No :TM-2406000277P **Test Date** :2024-07-26 **Operation Band** :BLE 1M Temp./Humi. :24.6/59 Antenna Pol. Frequency :2402 MHz :VERTICAL Operation Mode :Bandedge Engineer :Tony Chao **EUT Pol** :H Test Chamber : 966A



Freq.	Detector Mode	Spectrum Read Level	Factor	Actual FS	Limit	Margin
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dΒμV/m	dB
2389.28	Peak	44.79	6.26	51.05	74.00	-22.95
2390.00	Average	35.45	6.28	41.73	54.00	-12.27
2402.00	Peak	98.28	6.29	104.58		
2402.00	Average	98.06	6.29	104.35		
2496.58	Peak	42.47	6.83	49.30	74.00	-24.70
2498.08	Average	32.59	6.83	39.43	54.00	-14.57

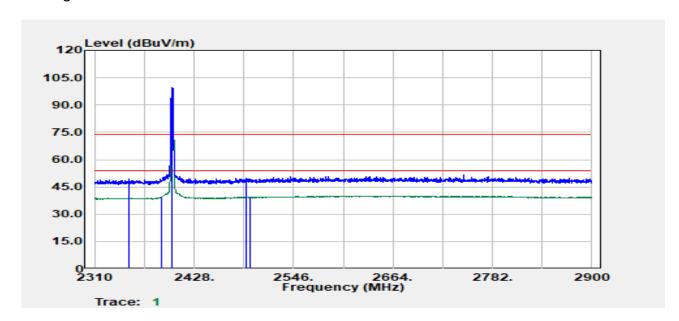


Project No: TM-2406000277P Page: 38 / 58 Report No.: TMWK2406002059KR Rev.: 03

Project No :TM-2406000277P Test Date :2024-07-26 Operation Band :BLE 1M Temp./Humi. :24.6/59

Frequency :2402 MHz Antenna Pol. :HORIZONTAL
Operation Mode :Bandedge Engineer :Tony Chao
EUT Pol :H Test Chamber : 966A

EUT Pol :H Setting :



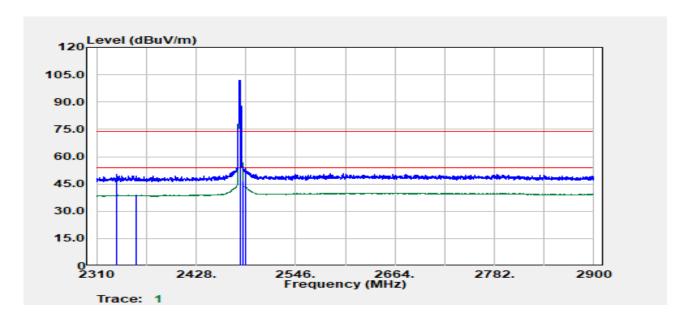
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dBµV	Factor dB	Actual FS dBµV/m	Limit dBµV/m	Margin dB
1711 12	1 10 001 // 10	αБμν	ub_	αΒμν/ιιι	αΒμν/ιιι	<u> </u>
2351.52 2390.00	Peak Average	43.16 33.32	6.24 6.28	49.40 39.60	74.00 54.00	-24.60 -14.40
2402.00	Peak	93.30	6.29	99.59		
2402.00	Average	93.06	6.29	99.35		
2490.58	Peak	42.95	6.81	49.76	74.00	-24.24
2493.83	Average	32.64	6.82	39.46	54.00	-14.54



 Project No:
 TM-2406000277P
 Page:
 39 / 58

 Report No.:
 TMWK2406002059KR
 Rev.:
 03

Project No :TM-2406000277P **Test Date** :2024-07-26 Operation Band :BLE 1M Temp./Humi. :24.6/59 Frequency :2480 MHz Antenna Pol. :VERTICAL Operation Mode Engineer :Bandedge :Ray Li **EUT Pol** Test Chamber : 966A :Н



Freq.	Detector Mode	Spectrum Read Level	Factor	Actual FS	Limit	Margin
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dΒμV/m	dB
2333.26	Peak	44.00	6.16	50.16	74.00	-23.84
2356.52	Average	32.51	6.25	38.76	54.00	-15.24
2480.00	Peak	95.29	6.67	101.95		
2480.00	Average	94.98	6.67	101.65		
2483.57	Average	39.85	6.72	46.56	54.00	-7.44
2486.83	Peak	46.53	6.76	53.29	74.00	-20.71



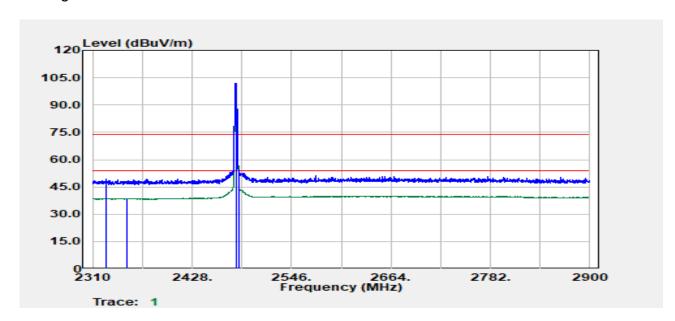
Project No: TM-2406000277P Page: 40 / 58 Report No.: TMWK2406002059KR Rev.: 03

 Project No
 :TM-2406000277P
 Test Date
 :2024-07-26

 Operation Band
 :BLE 1M
 Temp./Humi.
 :24.6/59

Frequency :2480 MHz Antenna Pol. :HORIZONTAL

Operation Mode :Bandedge Engineer :Ray Li EUT Pol :H Test Chamber : 966A

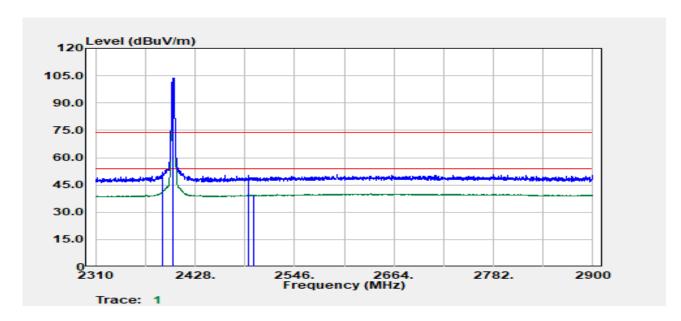


Freq.	Detector Mode	Spectrum Read Level	Factor	Actual FS	Limit	Margin
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBµV/m	dB
2326.26	Peak	43.41	6.17	49.58	74.00	-24.42
2350.77	Average	32.47	6.24	38.72	54.00	-15.28
2480.00	Peak	95.25	6.67	101.92		
2480.00	Average	94.95	6.67	101.62		
2483.57	Average	39.78	6.72	46.50	54.00	-7.50
2484.32	Peak	46.66	6.73	53.38	74.00	-20.62



Project No: TM-2406000277P Page: 41 / 58 Report No.: TMWK2406002059KR Rev.: 03

Project No :TM-2406000277P Test Date :2024-07-26 Operation Band :BLE 2M Temp./Humi. :24.6/59 Frequency :2402 MHz Antenna Pol. :VERTICAL Operation Mode Engineer :Bandedge :Ray Li **EUT Pol** Test Chamber : 966A :Н



Freq.	Detector Mode	Spectrum Read Level	Factor	Actual FS	Limit	Margin
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBμV/m	dB
2389.78	Average	35.13	6.28	41.40	54.00	-12.60
2390.00	Peak	45.60	6.28	51.88	74.00	-22.12
2402.00	Peak	97.44	6.29	103.73		
2402.00	Average	96.28	6.29	102.57		
2491.08	Peak	43.37	6.81	50.18	74.00	-23.82
2497.83	Average	32.56	6.83	39.39	54.00	-14.61



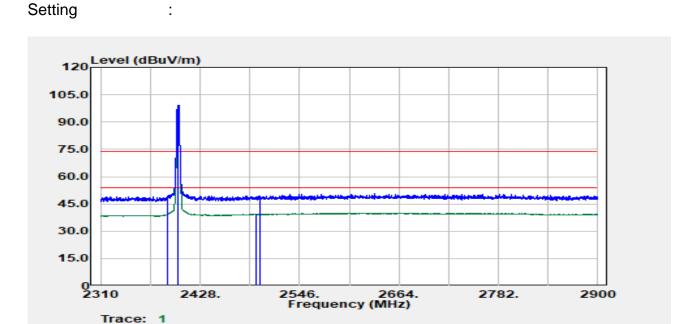
 Project No:
 TM-2406000277P
 Page:
 42 / 58

 Report No.:
 TMWK2406002059KR
 Rev.:
 03

Project No :TM-2406000277P Test Date :2024-07-26 Operation Band :BLE 2M Temp./Humi. :24.6/59

Frequency :2402 MHz Antenna Pol. :HORIZONTAL

Operation Mode :Bandedge :Ray Li EUT Pol :H Test Chamber : 966A



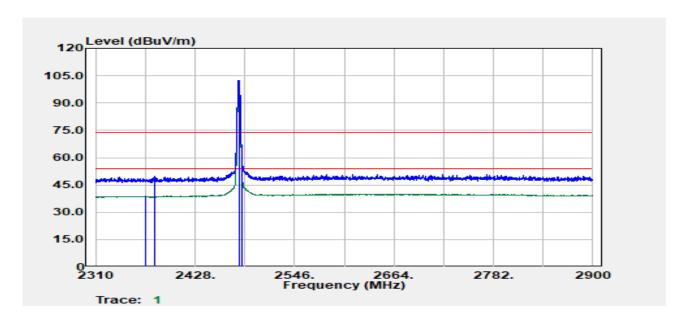
Freq.	Detector Mode	Spectrum Read Level	Factor	Actual FS	Limit	Margin
MHz	PK/QP/AV	dΒμV	dB	dΒμV/m	dBµV/m	dB
2389.03	Peak	43.30	6.26	49.56	74.00	-24.44
2390.00	Average	33.44	6.28	39.72	54.00	-14.28
2402.00	Peak	92.86	6.29	99.16		
2402.00	Average	91.67	6.29	97.96		
2494.58	Average	32.67	6.82	39.49	54.00	-14.51
2498.83	Peak	42.74	6.84	49.58	74.00	-24.42



 Project No:
 TM-2406000277P
 Page:
 43 / 58

 Report No.:
 TMWK2406002059KR
 Rev.:
 03

Project No :TM-2406000277P **Test Date** :2024-07-26 Operation Band :BLE 2M Temp./Humi. :24.6/59 Frequency :2480 MHz Antenna Pol. :VERTICAL Operation Mode Engineer :Bandedge :Ray Li **EUT Pol** Test Chamber : 966A :Н



Freq.	Detector Mode	Spectrum Read Level	Factor	Actual FS	Limit	Margin
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dΒμV/m	dB
2370.03	Average	32.58	6.16	38.74	54.00	-15.26
2379.78	Peak	43.64	6.07	49.71	74.00	-24.29
2480.00	Peak	95.79	6.67	102.45		
2480.00	Average	94.56	6.67	101.23		
2483.57	Peak	52.98	6.72	59.70	74.00	-14.30
2483.57	Average	46.33	6.72	53.05	54.00	-0.95

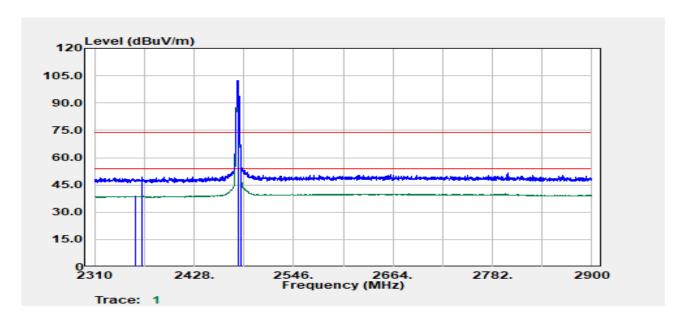


Project No: TM-2406000277P Page: 44 / 58 Report No.: TMWK2406002059KR Rev.: 03

Project No :TM-2406000277P Test Date :2024-07-26 Operation Band :BLE 2M Temp./Humi. :24.6/59

Frequency :2480 MHz Antenna Pol. :HORIZONTAL

Operation Mode :Bandedge Engineer :Ray Li EUT Pol :H Test Chamber : 966A



Freq.	Detector Mode	Spectrum Read Level	Factor	Actual FS	Limit	Margin
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dΒμV/m	dB
2359.02	Average	32.58	6.25	38.83	54.00	-15.17
2366.77	Peak	43.03	6.19	49.22	74.00	-24.78
2480.00	Peak	95.67	6.67	102.34		
2480.00	Average	94.47	6.67	101.13		
2483.57	Peak	53.35	6.72	60.07	74.00	-13.93
2483.57	Average	46.07	6.72	52.78	54.00	-1.22

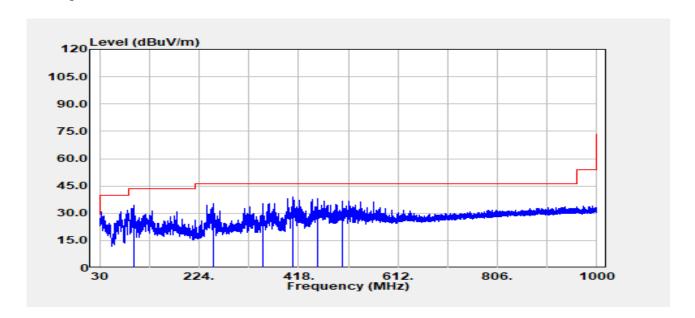


 Project No:
 TM-2406000277P
 Page:
 45 / 58

 Report No.:
 TMWK2406002059KR
 Rev.:
 03

TX Test Data

Project No :TM-2406000277P **Test Date** :2024-07-26 Operation Band Temp./Humi. :BLE 2M :24.6/59 Frequency :2480 MHz Antenna Pol. :Vertical Operation Mode :TX Engineer :Ray Li **EUT Pol** Test Chamber :H : 966A Setting :11



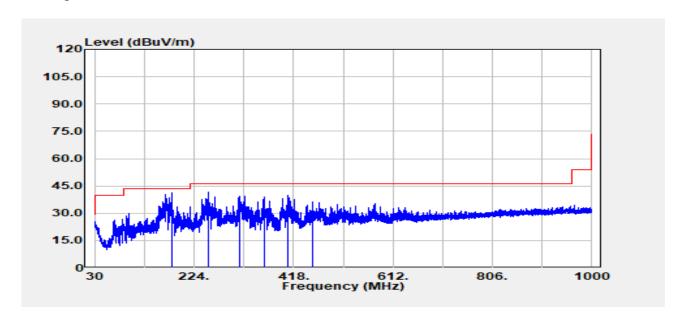
Freq.	Detector Mode	Spectrum Read Level	Factor	Actual FS	Limit	Margin
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBµV/m	dB
96.10	Peak	48.58	-14.03	34.55	43.50	-8.95
252.10	Peak	45.97	-10.58	35.39	46.00	-10.61
347.90	Peak	42.97	-7.42	35.54	46.00	-10.46
408.00	Peak	44.17	-5.44	38.73	46.00	-7.27
456.10	Peak	42.07	-4.21	37.86	46.00	-8.14
504.00	Peak	40.10	-3.33	36.77	46.00	-9.23



 Project No:
 TM-2406000277P
 Page:
 46 / 58

 Report No.:
 TMWK2406002059KR
 Rev.:
 03

:TM-2406000277P **Test Date** Project No :2024-07-26 Operation Band :BLE 2M Temp./Humi. :24.6/59 Frequency :2480 MHz Antenna Pol. :Horizontal Operation Mode Engineer :TX :Ray Li **EUT Pol** :H Test Chamber : 966A Setting :11

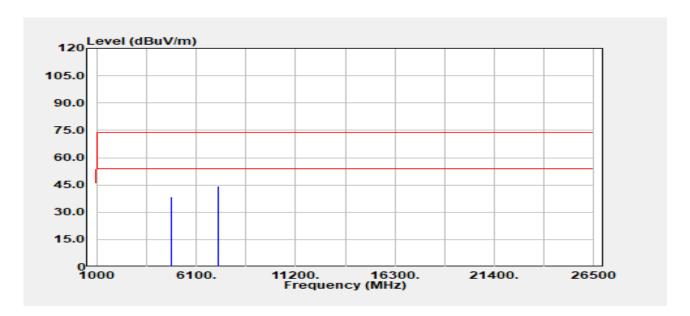


Freq.	Detector Mode	Spectrum Read Level	Factor	Actual FS	Limit	Margin
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBµV/m	dB
180.10	Peak	52.91	-11.51	41.40	43.50	-2.10
252.10	Peak	52.24	-10.58	41.67	46.00	-4.33
312.10	Peak	47.71	-8.15	39.55	46.00	-6.45
360.10	Peak	45.85	-6.99	38.86	46.00	-7.14
408.20	Peak	45.06	-5.43	39.63	46.00	-6.37
456.10	Peak	40.45	-4.21	36.24	46.00	-9.76



Project No: TM-2406000277P Page: 47 / 58 Report No.: TMWK2406002059KR Rev.: 03

Test Date Project No :TM-2406000277P :2024-07-26 Operation Band :BLE 1M Temp./Humi. :24.6/59 Frequency :2402 MHz Antenna Pol. :Vertical Operation Mode Engineer :TX :Ray Li **EUT Pol** :H Test Chamber : 966A Setting :11

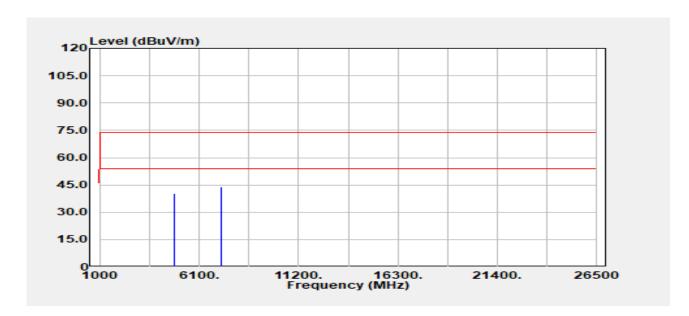


Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dBµV	Factor dB	Actual FS dBµV/m	Limit dBµV/m	Margin dB
		<u> </u>		<u> </u>	<u> </u>	
4804.00	Peak	36.06	2.23	38.29	74.00	-35.71
4804.00	Average	29.89	2.23	32.12	54.00	-21.88
7206.00	Peak	35.46	9.01	44.47	74.00	-29.53
7206.00	Average	25.82	9.01	34.83	54.00	-19.17



Project No: TM-2406000277P Page: 48 / 58 Report No.: TMWK2406002059KR Rev.: 03

Test Date Project No :TM-2406000277P :2024-07-26 Operation Band :BLE 1M Temp./Humi. :24.6/59 Frequency :2402 MHz Antenna Pol. :Horizontal Operation Mode Engineer :TX :Ray Li **EUT Pol** :H Test Chamber : 966A Setting :11



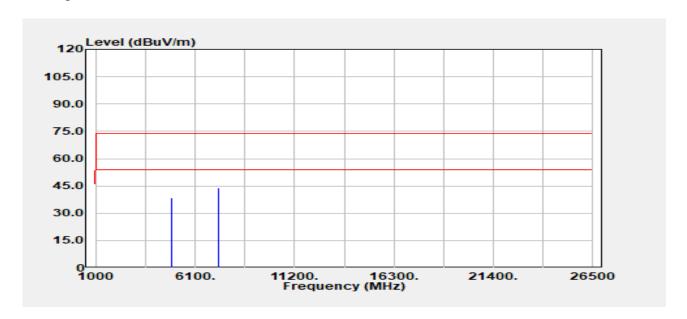
Freq.	Detector Mode	Spectrum Read Level	Factor	Actual FS	Limit	Margin
MHz	PK/QP/AV	dΒμV	dB	dΒμV/m	dBµV/m	dB
						_
4804.00	Peak	37.91	2.23	40.13	74.00	-33.87
4804.00	Average	33.00	2.23	35.23	54.00	-18.77
7206.00	Peak	34.90	9.01	43.91	74.00	-30.09
7206.00	Average	26.02	9.01	35.03	54.00	-18.97



 Project No:
 TM-2406000277P
 Page:
 49 / 58

 Report No.:
 TMWK2406002059KR
 Rev.:
 03

Test Date Project No :TM-2406000277P :2024-07-26 Operation Band :BLE 1M Temp./Humi. :24.6/59 Frequency :2442 MHz Antenna Pol. :Vertical Operation Mode Engineer :TX :Ray Li **EUT Pol** :H Test Chamber : 966A Setting :11

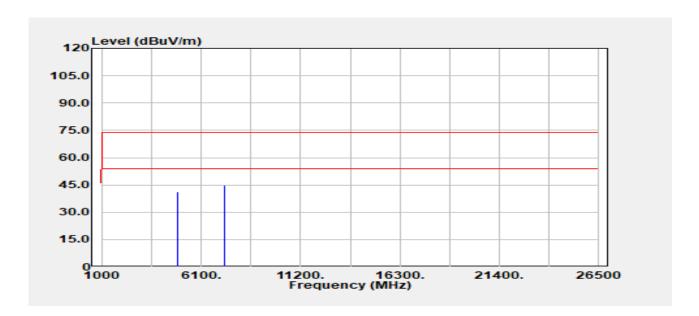


Freq.	Detector Mode	Spectrum Read Level	Factor	Actual FS	Limit	Margin
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBµV/m	dB
4884.00	Peak	35.92	2.58	38.50	74.00	-35.50
4884.00	Average	29.39	2.58	31.97	54.00	-22.03
7326.00	Peak	35.00	8.95	43.96	74.00	-30.04
7326.00	Average	26.91	8.95	35.87	54.00	-18.14



Project No: TM-2406000277P Page: 50 / 58 Report No.: TMWK2406002059KR Rev.: 03

Test Date Project No :TM-2406000277P :2024-07-26 Operation Band :BLE 1M Temp./Humi. :24.6/59 Frequency :2442 MHz Antenna Pol. :Horizontal Operation Mode Engineer :TX :Ray Li **EUT Pol** :H Test Chamber : 966A Setting :11

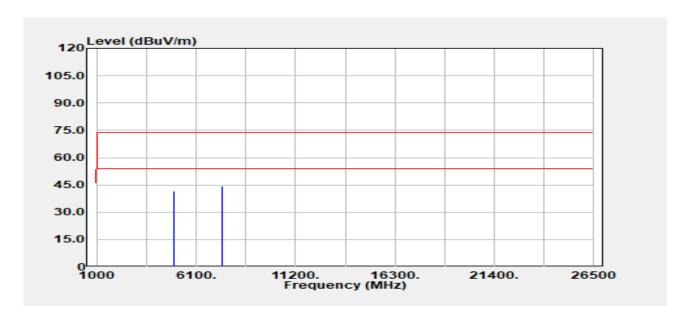


Freq.	Detector Mode	Spectrum Read Level	Factor	Actual FS	Limit	Margin
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dΒμV/m	dB
4884.00	Peak	38.64	2.58	41.22	74.00	-32.78
4884.00	Average	33.24	2.58	35.82	54.00	-18.18
7326.00	Peak	35.93	8.95	44.88	74.00	-29.12
7326.00	Average	27.27	8.95	36.22	54.00	-17.78



Project No: TM-2406000277P Page: 51 / 58 Report No.: TMWK2406002059KR Rev.: 03

Test Date Project No :TM-2406000277P :2024-07-26 Operation Band :BLE 1M Temp./Humi. :24.6/59 Frequency :2480 MHz Antenna Pol. :Vertical Operation Mode Engineer :TX :Ray Li **EUT Pol** :H Test Chamber : 966A Setting :11

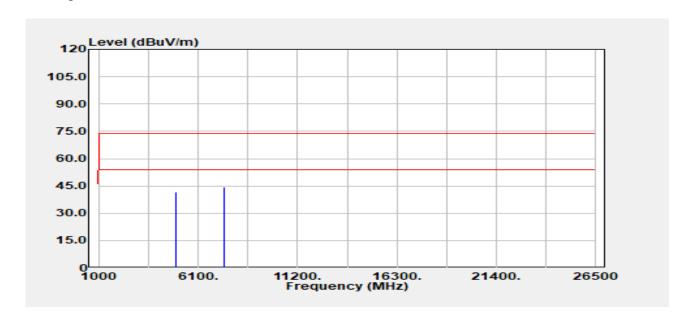


Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dBµV	Factor dB	Actual FS dBµV/m	Limit dBµV/m	Margin dB
		<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
4960.00	Peak	38.39	3.21	41.61	74.00	-32.39
4960.00	Average	30.76	3.21	33.97	54.00	-20.03
7440.00	Peak	35.59	8.92	44.51	74.00	-29.49
7440.00	Average	27.93	8.92	36.85	54.00	-17.15



Project No: TM-2406000277P Page: 52 / 58 Report No.: TMWK2406002059KR Rev.: 03

Project No :TM-2406000277P Test Date :2024-07-26 Operation Band :BLE 1M Temp./Humi. :24.6/59 Frequency :2480 MHz Antenna Pol. :Horizontal Operation Mode Engineer :TX :Ray Li **EUT Pol** :H Test Chamber : 966A Setting :11

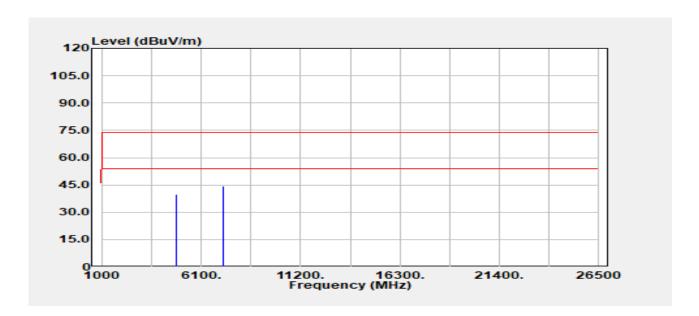


Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dBµV	Factor dB	Actual FS dBµV/m	Limit dBµV/m	Margin dB
		•		•	•	
4960.00	Peak	38.47	3.21	41.69	74.00	-32.31
4960.00	Average	33.37	3.21	36.59	54.00	-17.41
7440.00	Peak	35.25	8.92	44.17	74.00	-29.83
7440.00	Average	27.79	8.92	36.71	54.00	-17.29



Project No: TM-2406000277P Page: 53 / 58 Report No.: TMWK2406002059KR Rev.: 03

Test Date Project No :TM-2406000277P :2024-07-26 Operation Band :BLE 2M Temp./Humi. :24.6/59 Frequency :2402 MHz Antenna Pol. :Vertical Operation Mode Engineer :TX :Ray Li **EUT Pol** :H Test Chamber : 966A Setting :11

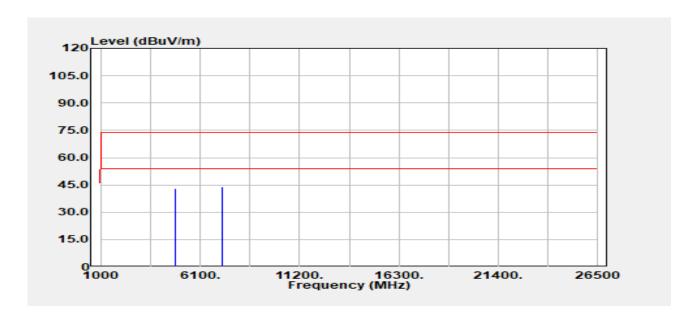


Freq.	Detector Mode	Spectrum Read Level	Factor	Actual FS	Limit	Margin
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBμV/m	dB
4804.00	Peak	37.56	2.23	39.79	74.00	-34.21
4804.00	Average	29.46	2.23	31.69	54.00	-22.31
7206.00	Peak	35.27	9.01	44.28	74.00	-29.72
7206.00	Average	26.24	9.01	35.25	54.00	-18.75



Project No: TM-2406000277P Page: 54 / 58 Report No.: TMWK2406002059KR Rev.: 03

Test Date Project No :TM-2406000277P :2024-07-26 Operation Band :BLE 2M Temp./Humi. :24.6/59 Frequency :2402 MHz Antenna Pol. :Horizontal Operation Mode Engineer :TX :Ray Li **EUT Pol** :H Test Chamber : 966A Setting :11



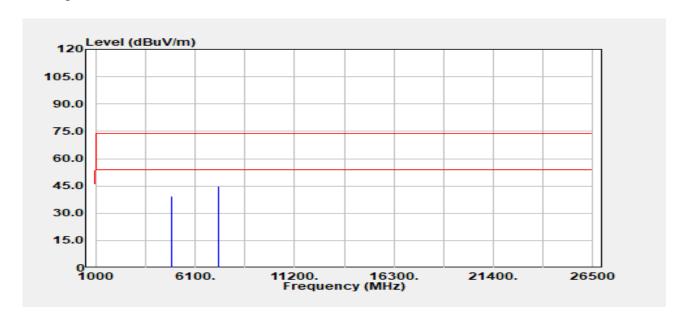
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dBµV	Factor dB	Actual FS dBµV/m	Limit dBµV/m	Margin dB
		•		•	•	
4804.00	Peak	40.80	2.23	43.03	74.00	-30.97
4804.00	Average	32.51	2.23	34.74	54.00	-19.26
7206.00	Peak	35.12	9.01	44.13	74.00	-29.87
7206.00	Average	26.26	9.01	35.28	54.00	-18.72



 Project No:
 TM-2406000277P
 Page:
 55 / 58

 Report No.:
 TMWK2406002059KR
 Rev.:
 03

Test Date Project No :TM-2406000277P :2024-07-26 Operation Band :BLE 2M Temp./Humi. :24.6/59 Frequency :2442 MHz Antenna Pol. :Vertical Operation Mode Engineer :TX :Ray Li **EUT Pol** :H Test Chamber : 966A Setting :11

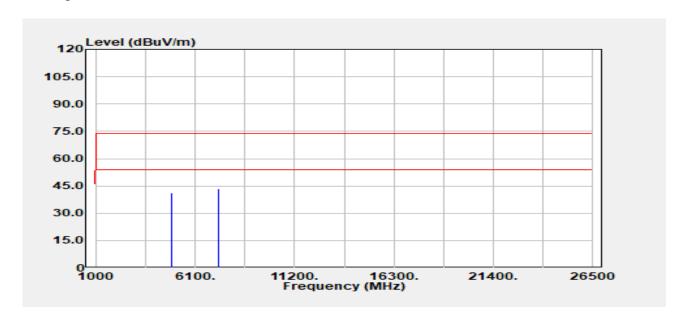


Freq.	Detector Mode	Spectrum Read Level	Factor	Actual FS	Limit	Margin
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBµV/m	dB
						_
4884.00	Peak	36.86	2.58	39.45	74.00	-34.55
4884.00	Average	29.36	2.58	31.94	54.00	-22.06
7326.00	Peak	35.93	8.95	44.89	74.00	-29.11
7326.00	Average	26.57	8.95	35.52	54.00	-18.48



Project No: TM-2406000277P Page: 56 / 58 Report No.: TMWK2406002059KR Rev.: 03

Test Date Project No :TM-2406000277P :2024-07-26 Operation Band :BLE 2M Temp./Humi. :24.6/59 Frequency :2442 MHz Antenna Pol. :Horizontal Operation Mode Engineer :TX :Ray Li **EUT Pol** :H Test Chamber : 966A Setting :11



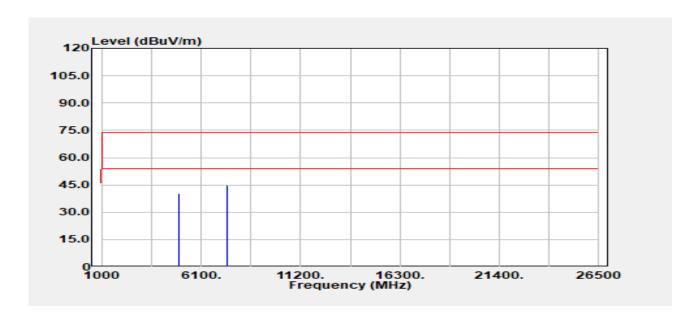
Freq.	Detector Mode	Spectrum Read Level	Factor	Actual FS	Limit	Margin
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBµV/m	dB
						_
4884.00	Peak	38.77	2.58	41.35	74.00	-32.65
4884.00	Average	31.58	2.58	34.16	54.00	-19.84
7326.00	Peak	34.67	8.95	43.63	74.00	-30.37
7326.00	Average	27.06	8.95	36.01	54.00	-17.99



 Project No:
 TM-2406000277P
 Page:
 57 / 58

 Report No.:
 TMWK2406002059KR
 Rev.:
 03

Test Date Project No :TM-2406000277P :2024-07-26 Operation Band :BLE 2M Temp./Humi. :24.6/59 Frequency :2480 MHz Antenna Pol. :Vertical Operation Mode Engineer :TX :Ray Li **EUT Pol** :H Test Chamber : 966A Setting :11

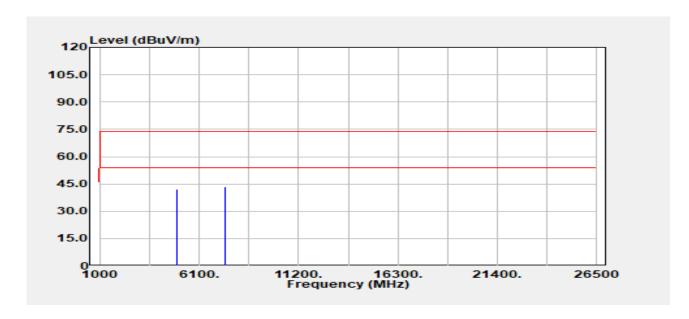


Freq.	Detector Mode	Spectrum Read Level	Factor	Actual FS	Limit	Margin
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dΒμV/m	dB
4960.00	Peak	36.91	3.21	40.12	74.00	-33.88
4960.00	Average	29.54	3.21	32.76	54.00	-21.24
7440.00	Peak	35.75	8.92	44.67	74.00	-29.33
7440.00	Average	27.26	8.92	36.18	54.00	-17.82



Project No: TM-2406000277P Page: 58 / 58 Report No.: TMWK2406002059KR Rev.: 03

Project No :TM-2406000277P Test Date :2024-07-26 Operation Band Temp./Humi. :BLE 2M :24.6/59 Frequency :2480 MHz Antenna Pol. :Horizontal Operation Mode :TX Engineer :Ray Li **EUT Pol** :H Test Chamber : 966A Setting :11



Freq.	Detector Mode	Spectrum Read Level	Factor	Actual FS	Limit	Margin
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBμV/m	dB
4960.00	Peak	38.73	3.21	41.94	74.00	-32.06
4960.00	Average	31.46	3.21	34.67	54.00	-19.33
7440.00	Peak	34.39	8.92	43.31	74.00	-30.69
7440.00	Average	27.23	8.92	36.15	54.00	-17.85

- End of Test Report -