

Project No: TM-2311000354P
Report No.: TMWK2402000497KR

FCC ID: P4Q-SC680A
IC: 2420C-SC680A

Page: 1 / 68
Rev.: 01

RADIO TEST REPORT

FCC 47 CFR PART 15 SUBPART C (CLASS II PERMISSIVE CHANGE) INDUSTRY CANADA RSS-247 (CLASS IV PERMISSIVE CHANGE)

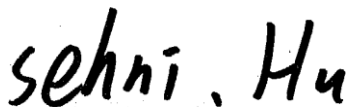
Test Standard	FCC Part 15.247 IC RSS-247 issue 3 and IC RSS-GEN issue 5
Product name	Smart Module
Brand Name	Mio / MAGELLAN / NAVMAN / MiTAC
Model No.	SC680A-NA
Test Result	Pass
Statements of Conformity	Determination of compliance is based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

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

Revision History

Rev.	Issue Date	Revisions	Effect Page	Revised By
00	April 16, 2024	Initial Issue	ALL	Peggy Tsai
01	April 23, 2024	See the following Note Rev. (01)	P.5	Peggy Tsai

Rev. (01):

1. Modify FCC ID in section 1.1.

Table of contents

1. GENERAL INFORMATION	4
1.1 EUT INFORMATION	4
1.2 INFORMATION ABOUT THE FHSS CHARACTERISTICS	6
1.3 EUT CHANNEL INFORMATION	7
1.4 ANTENNA INFORMATION	7
1.5 MEASUREMENT UNCERTAINTY	8
1.6 FACILITIES AND TEST LOCATION	8
1.7 INSTRUMENT CALIBRATION	9
1.8 SUPPORT AND EUT ACCESSORIES EQUIPMENT	11
1.9 TEST SETUP DIAGRAM	11
1.10TEST METHODOLOGY AND APPLIED STANDARDS	12
2. TEST SUMMARY	13
3. DESCRIPTION OF TEST MODES	14
3.1 THE WORST MODE OF OPERATING CONDITION	14
3.2 THE WORST MODE OF MEASUREMENT	15
4. TEST RESULT	16
4.1 AC POWER LINE CONDUCTED EMISSION	16
4.2 OUTPUT POWER MEASUREMENT	25
4.3 RADIATION BANDEDGE AND SPURIOUS EMISSION	28
APPENDIX-A TEST PHOTO	A-1

Report No.: TMWK2402000497KR

1. GENERAL INFORMATION

1.1 EUT INFORMATION

Applicant	Mitac Digital Technology Corporation 4F., No. 1, R&D Road 2, Hsinchu Science Park, Hsinchu 30076 Taiwan
Manufacturer	Mitac Digital Technology Corporation 4F., No. 1, R&D Road 2, Hsinchu Science Park, Hsinchu 30076 Taiwan
Equipment	Smart Module
Brand Name	Mio / MAGELLAN / NAVMAN / MITAC
Model Name	SC680A-NA
Model Discrepancy	Difference of the those brand names (list on this report) are just for marketing purpose only.
Host Equipment	Tablet
Host model / HMN	N722
Received Date	November 27, 2023
Date of Test	December 7, 2023 ~ April 10, 2024
Power Supply	<ol style="list-style-type: none"> 1. Power from Cradle. MIO / N564 I/P (1): DC 12V, 1A or DC 24V, 0.5A (Fleet Port) I/P (2): DC 5V, 2A (Micro USB) 2. Power from Adapter. LUCENT TRANS / 1A52-PD2W I/P: 100-240Vac, 800mA, 50-60Hz O/P: 5Vdc, 3A or 9Vdc, 2.22A 3. Power from Adapter. TTT / MSS050200BI I/P: 100-240Vac, 0.3A, 50-60Hz O/P: 5Vdc, 2A(10.0W) 4. Power from Battery. Apower Electronics Co., Ltd. / AEC565786B Rating: 3.8Vdc, 4000mAh, 15.2Wh 5. Power from Car Charger. TTT / TCV10100 I/P: DC 12-24V, 1.3A O/P: DC 5V, 2A

Report No.: TMWK2402000497KR

PMN	SC680A-NA
EUT Serial #	HKE3AM00013
Class II Permissive Change	The intention of this application is to enable the modular certified FCC ID: P4Q-SC680A to be integrated in MiTAC Tablet N722. The module installed into host platform mentioned above is electronically and mechanically identical to the original certified module. Software security remains unchanged from the original application.
Class IV Permissive Change	The intention of this application is to enable the modular certified IC: 2420C-SC680A to be integrated in MiTAC Tablet N722. The module installed into host platform mentioned above is electronically and mechanically identical to the original certified module. Software security remains unchanged from the original application.

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.
3. Disclaimer: Variant information between/among trademarks is provided by the applicant, test results of this report are applicable to the sample EUT received of main test model name.

1.2 INFORMATION ABOUT THE FHSS CHARACTERISTICS

1.2.1 Pseudorandom Frequency Hopping Sequence

The channel is represented by a pseudo-random hopping sequence hopping through the 79 RF channels. The hopping sequence is unique for the piconet and is determined by the Bluetooth device address of the master; the phase in the hopping sequence is determined by the Bluetooth clock of the master. The channel is divided into time slots where each slot corresponds to an RF hop frequency. Consecutive hops correspond to different RF hop frequencies. The nominal hop rate is 1 600 hops/s.

1.2.2 Equal Hopping Frequency Use

The channels of this system will be used equally over the long-term distribution of the hopsets.

1.2.3 Example of a 79 hopping sequence in data mode:

02, 05, 31, 24, 20, 10, 43, 36, 30, 23, 40, 06, 21, 50, 44, 09, 71, 78, 01, 13, 73, 07, 70, 72, 35, 62, 42, 11, 41, 08, 16, 29, 60, 15, 34, 61, 58, 04, 67, 12, 22, 53, 57, 18, 27, 76, 39, 32, 17, 77, 52, 33, 56, 46, 37, 47, 64, 49, 45, 38, 69, 14, 51, 26, 79, 19, 28, 65, 75, 54, 48, 03, 25, 66, 05, 16, 68, 74, 59, 63, 55

1.2.4 System Receiver Input Bandwidth

Each channel bandwidth is 1MHz.

The system receivers have input bandwidths that match the hopping channel bandwidths of their corresponding transmitters and shift frequencies in synchronization with the transmitted signals.

1.2.5 Equipment Description

15.247(a)(1) that the Rx input bandwidths shift frequencies in synchronization with the transmitted signals.

15.247(g): In accordance with the Bluetooth Industry Standard, the system is designed to comply with all of the regulations in Section 15.247 when the transmitter is presented with a continuous data (or information) system.

15.247(h): In accordance with the Bluetooth Industry Standard, the system does not coordinate its channels selection/ hopping sequence with other frequency hopping systems for the express purpose of avoiding the simultaneous occupancy of individual hopping frequencies by multiple transmitters.

RSS-247, 5.1 (a): The system shall hop to channel frequencies that are selected at the system hopping rate from a pseudo randomly ordered list of hopping frequencies. The system receivers shall have input bandwidths that match the hopping channel bandwidths of their corresponding transmitters and shall shift frequencies in synchronization with the transmitted signals.

Report No.: TMWK2402000497KR

1.3 EUT CHANNEL INFORMATION

Frequency Range	2402MHz-2480MHz
Modulation Type	1. GFSK for BDR-1Mbps 2. $\pi/4$ -DQPSK for EDR-2Mbps 3. 8DPSK for EDR-3Mbps
Number of channel	79 Channels

Remark:

Refer as ANSI C63.10: 2013 clause 5.6.1 Table 4 and RSS-GEN Table 1 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

1.4 ANTENNA INFORMATION

Antenna Specification	<input checked="" type="checkbox"/> PIFA <input type="checkbox"/> PCB <input type="checkbox"/> Dipole <input type="checkbox"/> Coils
Antenna Gain	Gain: 0.44 dBi
Brand / Model	MIO / N722 8" PAD

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 and RSS-GEN 6.8.

Report No.: TMWK2402000497KR

1.5 MEASUREMENT UNCERTAINTY

PARAMETER	UNCERTAINTY
AC Powerline Conducted Emission	± 2.213 dB
RF output power (Power Meter + Power sensor)	± 0.243 dB
Radiated Emission_9kHz-30MHz	± 3.761 dB
Radiated Emission_30MHz-200MHz	± 3.473 dB
Radiated Emission_200MHz-1GHz	± 3.946 dB
Radiated Emission_1GHz-6GHz	± 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.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.

1.6 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.
 No. 12, Ln. 116, Wugong 3rd Rd., Wugu Dist., New Taipei City, Taiwan.

CAB identifier: TW1309

Test site	Test Engineer	Remark
AC Conduction Room	Czerny Lin	-
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 public Access Link (PAL) database, FCC Registration No. :444940, the FCC Designation No.:TW1309

Report No.: TMWK2402000497KR

1.7 INSTRUMENT CALIBRATION

966A_Radiated					
Name of Equipment	Manufacturer	Model	Serial Number	Calibration Date	Calibration Due
Thermo-Hygro Meter	WISEWIND	1206	D07	2023-12-08	2024-12-07
Signal Analyzer	KEYSIGHT	N9010A	MY54200716	2023-10-13	2024-10-12
Loop Antenna	COM-POWER	AL-130	121051	2023-05-23	2024-05-22
Bi-Log Antenna	Sunol Sciences	JB3	A030105	2023-08-08	2024-08-07
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
High Pass Filters	Titan Microwave	T04H30001800070S01	22011402-4	2023-06-17	2024-06-16
Horn Antenna	SCHWARZBECK	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				

Conducted FCC_ALL					
Name of Equipment	Manufacturer	Model	Serial Number	Calibration Date	Calibration Due
EXA Signal Analyzer	Keysight	N9030B	MY62291089	2023-10-13	2024-10-12
Power Meter	Anritsu	ML2496A	2136002	2023-11-16	2024-11-15
Power Sensor	Anritsu	MA2411B	1911386	2023-07-25	2024-07-24
Power Sensor	Anritsu	MA2411B	1911387	2023-07-25	2024-07-24
Software	Radio Test Software Ver. 21				

Remark:

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

AC Mains Conduction					
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
				2024-02-29	2025-02-27
Cable	EMCI	CFD300-NL	CERF	2023-06-27	2024-06-26
Software	e3 V6-110812				

Remark:

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

Report No.: TMWK2402000497KR

1.8 SUPPORT AND EUT ACCESSORIES EQUIPMENT

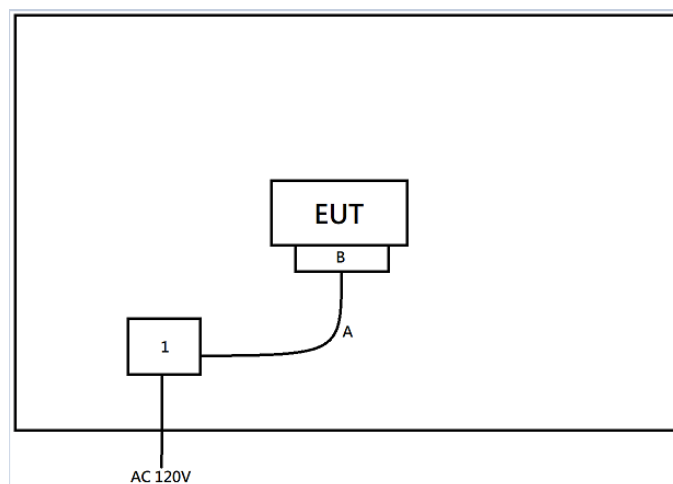
EUT Accessories Equipment						
No.	Equipment	Brand	Model	Series No.	FCC ID	IC
	N/A					

Support Equipment (Conducted)						
No.	Equipment	Brand	Model	Series No.	FCC ID	IC
1	NB(E)	Lenovo	T460	N/A	N/A	N/A

Support Equipment (Conduction)						
No.	Equipment	Brand	Model	Series No.	FCC ID	IC
1	Type C Cable	JHEN VEI ELECTRONIC CO.,LTD	422N63500017	N/A	N/A	N/A
2	USB Cable	Kunshan Cablex [Copartner] MFG	422N46100001	N/A	N/A	N/A
3	Adapter	LUCENT TRANS	1A52-PD20W	N/A	N/A	N/A
4	Adapter	LUCENT TRANS	MSS050200BI	N/A	N/A	N/A

Support Equipment (RSE)						
No.	Equipment	Brand	Model	Series No.	FCC ID	IC
1	DC Power Source	GWINSTEK	SPS-3610	GPE880163	N/A	N/A
A	Fleet Cable	Kunshan Cablex [Copartner] MFG	N/A	N/A	N/A	N/A
B	Cradle	MITAC	N564	N/A	N/A	N/A

1.9 TEST SETUP DIAGRAM



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 662911, KDB 558074, RSS-247 Issue 3 and RSS-GEN Issue 5.

Report No.: TMWK2402000497KR

2. TEST SUMMARY

IC Standard Section	FCC Standard Section	Report Section	Test Item	Result
RSS-GEN 6.8	15.203	1.3	Antenna Requirement	Pass
RSS-GEN 8.8	15.207(a)	4.1	AC Conducted Emission	Pass
RSS-247(5.4)(b)	15.247(b)(1)	4.2	Output Power Measurement	Pass
RSS-GEN 8.9, 8.10	15.247(d) 15.209 15.205	4.3	Radiation Band Edge	Pass
RSS-GEN 8.9, 8.10	15.247(d) 15.209 15.205	4.3	Radiation Spurious Emission	Pass

Note:

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

Report No.: TMWK2402000497KR

3. DESCRIPTION OF TEST MODES

3.1 THE WORST MODE OF OPERATING CONDITION

Operation mode	GFSK for BDR-1Mbps (DH5) $\pi/4$ -DQPSK for 2Mbps (2DH5) 8DPSK for EDR-3Mbps (3DH5)
Test Channel Frequencies	<p>GFSK for BDR-1Mbps: 1.Lowest Channel: 2402MHz 2.Middle Channel: 2441MHz 3.Highest Channel: 2480MHz</p> <p>$\pi/4$-DQPSK for 2Mbps: 1.Lowest Channel: 2402MHz 2.Middle Channel: 2441MHz 3.Highest Channel: 2480MHz</p> <p>8DPSK for EDR-3Mbps: 1.Lowest Channel: 2402MHz 2.Middle Channel: 2441MHz 3.Highest Channel: 2480MHz</p>

Remark:

1. EUT pre-scanned data rate of output power for each mode, the worst data rate were recorded in this report.
2. The system support GFSK , $\pi/4$ DQPSK ,8DPSK , the 8DPSK were reduced since the identical parameters with 8dpsk.

Report No.: TMWK2402000497KR

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 Adapter (1A52-PD20W) Mode 2: EUT power by Adapter (MSS050200BI)
Worst Mode	<input checked="" type="checkbox"/> Mode 1 <input checked="" 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 DC12V Fleet Cable with Cradle
Worst Mode	<input checked="" type="checkbox"/> Mode 1 <input type="checkbox"/> Mode 2 <input type="checkbox"/> Mode 3 <input type="checkbox"/> Mode 4
Worst Position	<input type="checkbox"/> Placed in fixed position. <input type="checkbox"/> Placed in fixed position at X-Plane (E2-Plane) <input type="checkbox"/> Placed in fixed position at Y-Plane (E1-Plane) <input checked="" 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 DC12V Fleet Cable with Cradle Mode 2: EUT power by DC24V Fleet Cable with Cradle Mode 3: EUT power by Type C With Adapter(1A52-PD20W) Mode 4: EUT power by Type C With Adapter(MSS050200BI) Mode 5: EUT power by Battery Mode 6: EUT power by DC12V With Car Charger Mode 7: EUT power by DC24V With Car Charger
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 [co-location]	
Test Condition	Radiated Emission [co-location]
Power supply Mode	Mode 1: BT+LTE B2+NFC Mode 2: BT+LTE B13+NFC
Worst Mode	<input checked="" type="checkbox"/> Mode 1 <input checked="" 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. 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. 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
4. The platform device has an NFC transmitter and a WLAN&WWAN 's module, which evaluates Radiated Emission based on co-location.

Report No.: TMWK2402000497KR

4. TEST RESULT

4.1 AC POWER LINE CONDUCTED EMISSION

4.1.1 Test Limit

According to §15.207(a) and RSS-GEN section 8.8,

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

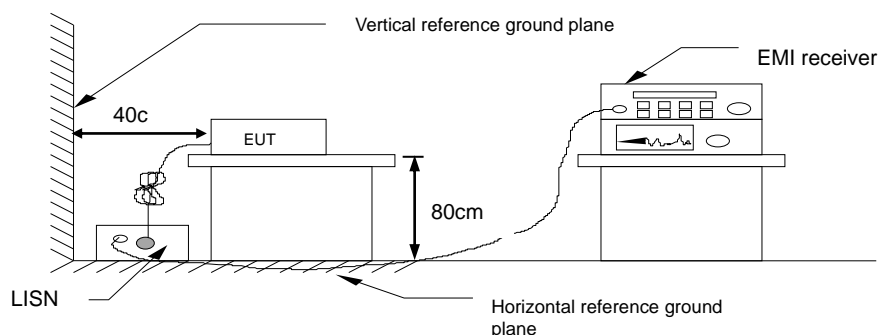
* Decreases with the logarithm of the frequency.

4.1.2 Test Procedure

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

1. The EUT was placed 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



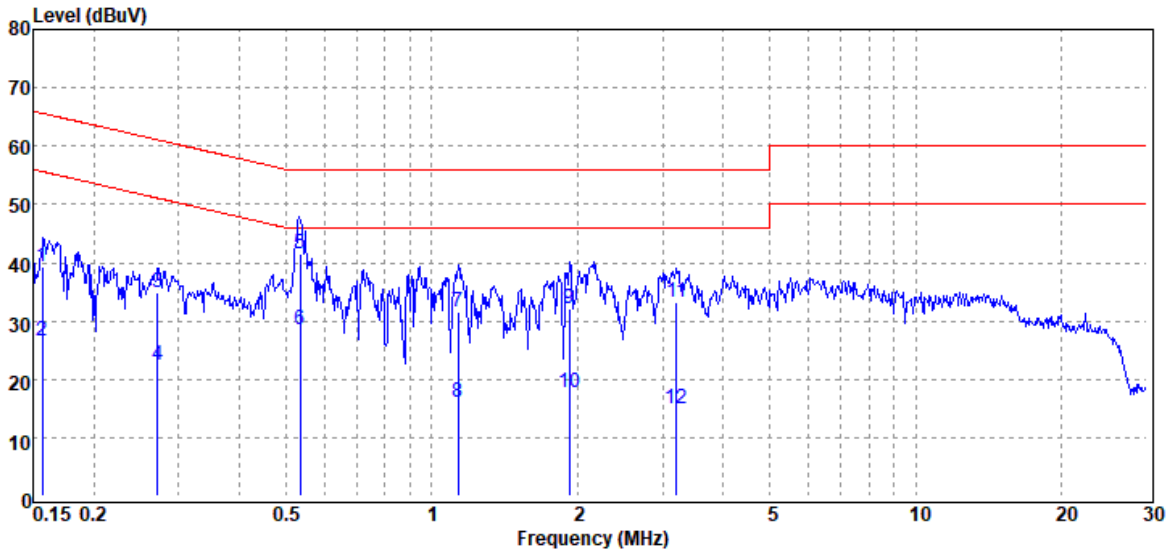
4.1.4 Test Result

Pass.

Report No.: TMWK2402000497KR

Test Data

Project No	: TM-2311000354P	Test Date	: 2024-04-02
Operation Mode	: BT	Temp./Humi.	: 23.5°C / 52%
Test Chamber	: Conduction	Engineer	: Czerny Lin
Probe	: LINE	Test Voltage	: AC 120V/60Hz
Note	: Mode 1		



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dB μ V	Factor dB	Actual FS dB μ V	Limit dB μ V	Margin dB
0.157	QP	39.11	0.15	39.26	65.63	-26.37
0.157	Average	26.33	0.15	26.48	55.63	-29.15
0.271	QP	34.82	0.15	34.97	61.09	-26.12
0.271	Average	22.31	0.15	22.46	51.09	-28.63
0.534	QP	41.36	0.15	41.51	56.00	-14.49
0.534	Average	28.38	0.15	28.53	46.00	-17.47
1.135	QP	31.36	0.17	31.53	56.00	-24.47
1.135	Average	15.89	0.17	16.06	46.00	-29.94
1.927	QP	31.77	0.22	31.99	56.00	-24.01
1.927	Average	17.40	0.22	17.62	46.00	-28.38
3.209	QP	32.90	0.24	33.14	56.00	-22.86
3.209	Average	14.71	0.24	14.95	46.00	-31.05

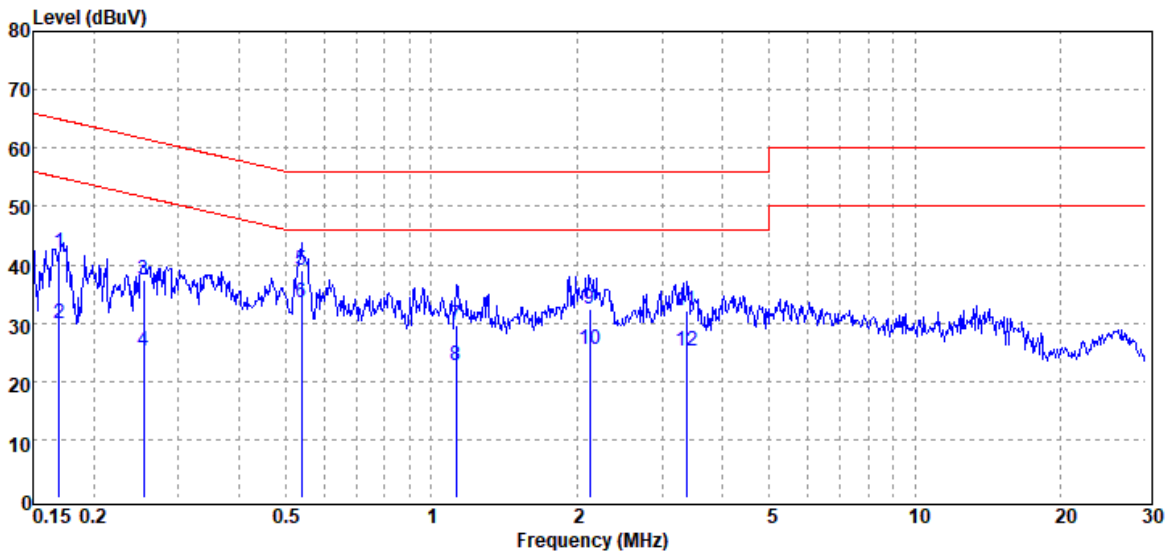
Note: 1. Actual FS= Spectrum Read Level + Factor

Note: 2. Margin= Actual FS - Limit

Report No.: TMWK2402000497KR

Project No : TM-2311000354P
 Operation Mode : BT
 Test Chamber : Conduction
 Probe : NEUTRAL
 Note : Mode 1

Test Date : 2024-04-02
 Temp./Humi. : 23.5°C / 52%
 Engineer : Czerny Lin
 Test Voltage : AC 120V/60Hz



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dB μ V	Factor dB	Actual FS dB μ V	Limit dB μ V	Margin dB
0.170	QP	41.98	0.19	42.17	64.97	-22.80
0.170	Average	29.81	0.19	30.00	54.97	-24.97
0.254	QP	37.16	0.19	37.35	61.62	-24.27
0.254	Average	25.10	0.19	25.29	51.62	-26.33
0.538	QP	38.89	0.19	39.08	56.00	-16.92
0.538	Average	33.41	0.19	33.60	46.00	-12.40
1.126	QP	29.38	0.22	29.60	56.00	-26.40
1.126	Average	22.58	0.22	22.80	46.00	-23.20
2.128	QP	32.02	0.26	32.28	56.00	-23.72
2.128	Average	25.25	0.26	25.51	46.00	-20.49
3.367	QP	31.86	0.29	32.15	56.00	-23.85
3.367	Average	24.90	0.29	25.19	46.00	-20.81

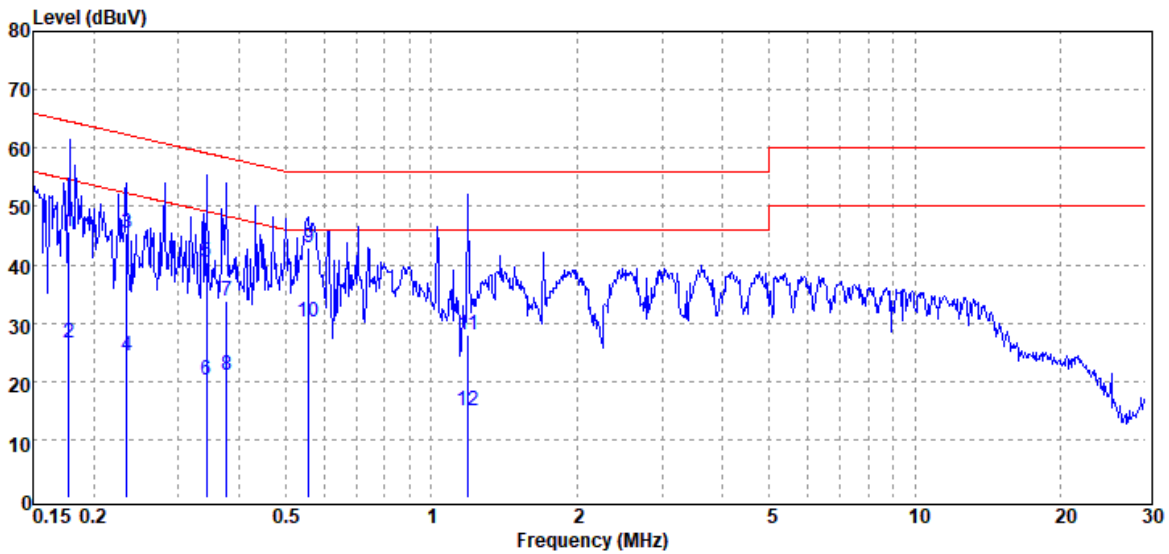
Note: 1. Actual FS= Spectrum Read Level + Factor

Note: 2. Margin= Actual FS - Limit

Report No.: TMWK2402000497KR

Project No : TM-2311000354P
 Operation Mode : BT
 Test Chamber : Conduction
 Probe : LINE
 Note : Mode 1

Test Date : 2024-04-02
 Temp./Humi. : 23.5°C / 52%
 Engineer : Czerny Lin
 Test Voltage : AC 230V/50Hz



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dBμV	Factor dB	Actual FS dBμV	Limit dBμV	Margin dB
0.178	QP	45.56	0.15	45.71	64.58	-18.87
0.178	Average	26.56	0.15	26.71	54.58	-27.87
0.235	QP	45.11	0.15	45.26	62.28	-17.02
0.235	Average	24.18	0.15	24.33	52.28	-27.95
0.343	QP	40.15	0.15	40.30	59.13	-18.83
0.343	Average	20.12	0.15	20.27	49.13	-28.86
0.377	QP	33.64	0.15	33.79	58.34	-24.55
0.377	Average	20.98	0.15	21.13	48.34	-27.21
0.557	QP	42.75	0.15	42.90	56.00	-13.10
0.557	Average	29.98	0.15	30.13	46.00	-15.87
1.192	QP	27.91	0.17	28.08	56.00	-27.92
1.192	Average	14.76	0.17	14.93	46.00	-31.07

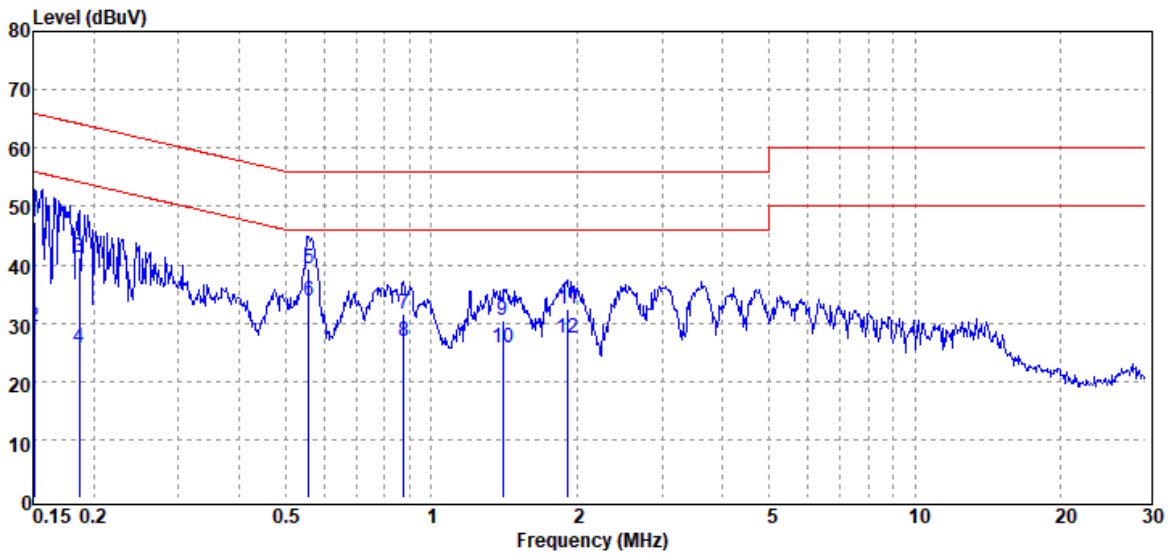
Note: 1. Actual FS= Spectrum Read Level + Factor

Note: 2. Margin= Actual FS - Limit

Report No.: TMWK2402000497KR

Project No : TM-2311000354P
 Operation Mode : BT
 Test Chamber : Conduction
 Probe : NEUTRAL
 Note : Mode 1

Test Date : 2024-04-02
 Temp./Humi. : 23.5°C / 52%
 Engineer : Czerny Lin
 Test Voltage : AC 230V/50Hz



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dB μ V	Factor dB	Actual FS dB μ V	Limit dB μ V	Margin dB
0.151	QP	47.12	0.20	47.32	65.95	-18.63
0.151	Average	29.15	0.20	29.35	55.95	-26.60
0.187	QP	41.11	0.19	41.30	64.15	-22.85
0.187	Average	25.65	0.19	25.84	54.15	-28.31
0.558	QP	39.23	0.19	39.42	56.00	-16.58
0.558	Average	33.62	0.19	33.81	46.00	-12.19
0.878	QP	31.23	0.21	31.44	56.00	-24.56
0.878	Average	26.61	0.21	26.82	46.00	-19.18
1.404	QP	30.15	0.23	30.38	56.00	-25.62
1.404	Average	25.40	0.23	25.63	46.00	-20.37
1.914	QP	32.13	0.26	32.39	56.00	-23.61
1.914	Average	27.23	0.26	27.49	46.00	-18.51

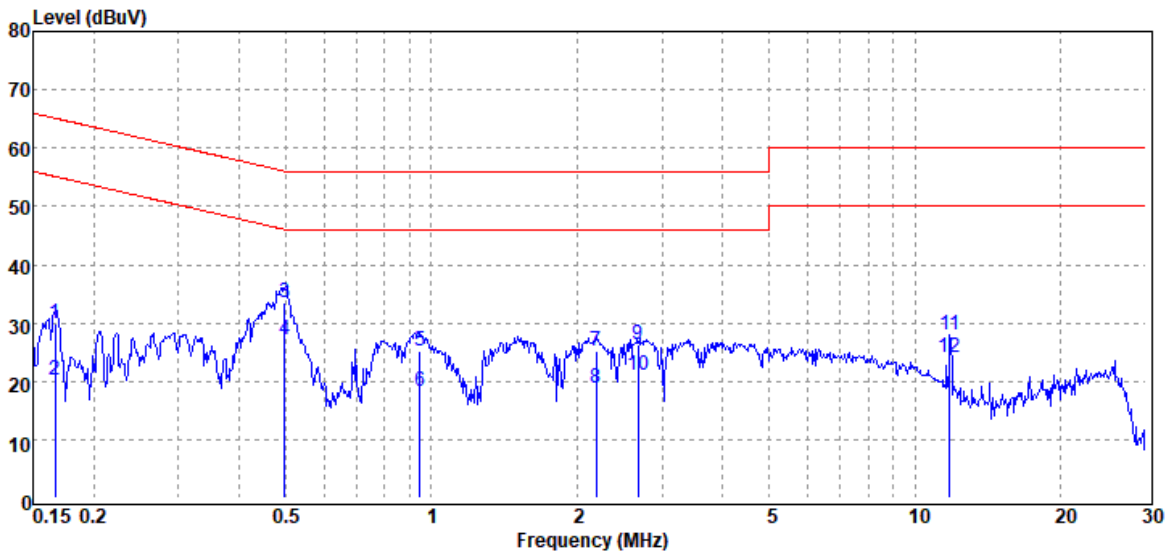
Note: 1. Actual FS= Spectrum Read Level + Factor

Note: 2. Margin= Actual FS - Limit

Report No.: TMWK2402000497KR

Project No : TM-2311000354P
 Operation Mode : BT
 Test Chamber : Conduction
 Probe : LINE
 Note : Mode 2

Test Date : 2024-04-08
 Temp./Humi. : 21.5°C / 50%
 Engineer : Czerny Lin
 Test Voltage : AC 120V/60Hz



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dB μ V	Factor dB	Actual FS dB μ V	Limit dB μ V	Margin dB
0.166	QP	29.62	0.15	29.77	65.13	-35.36
0.166	Average	20.00	0.15	20.15	55.13	-34.98
0.497	QP	33.36	0.15	33.51	56.04	-22.53
0.497	Average	26.93	0.15	27.08	46.04	-18.96
0.947	QP	24.92	0.16	25.08	56.00	-30.92
0.947	Average	18.17	0.16	18.33	46.00	-27.67
2.192	QP	25.09	0.22	25.31	56.00	-30.69
2.192	Average	18.56	0.22	18.78	46.00	-27.22
2.680	QP	26.01	0.24	26.25	56.00	-29.75
2.680	Average	20.69	0.24	20.93	46.00	-25.07
11.816	QP	27.53	0.40	27.93	60.00	-32.07
11.816	Average	23.70	0.40	24.10	50.00	-25.90

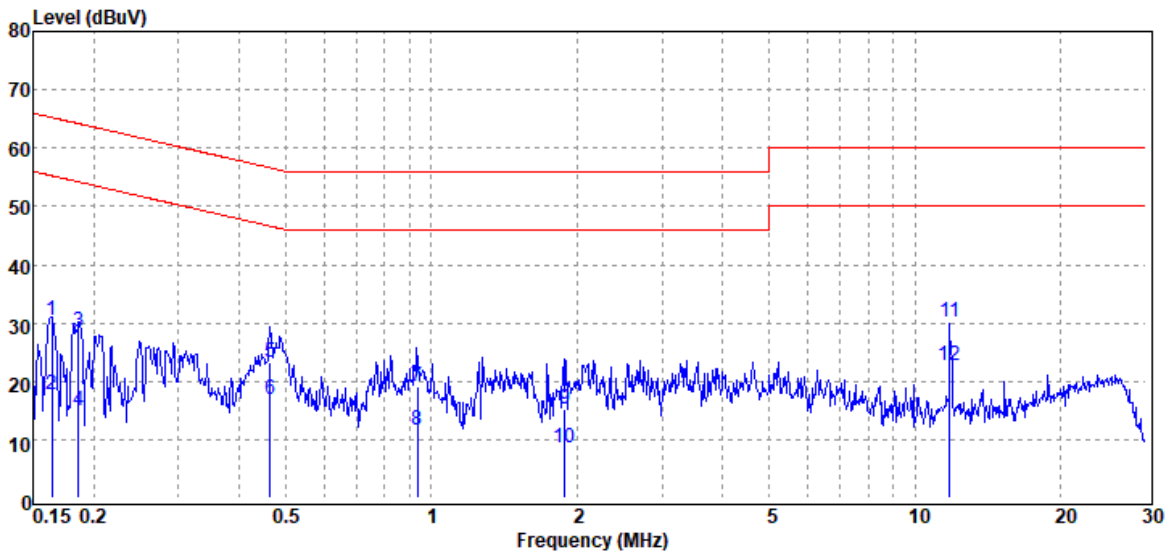
Note: 1. Actual FS= Spectrum Read Level + Factor

Note: 2. Margin= Actual FS - Limit

Report No.: TMWK2402000497KR

Project No : TM-2311000354P
 Operation Mode : BT
 Test Chamber : Conduction
 Probe : NEUTRAL
 Note : Mode 2

Test Date : 2024-04-08
 Temp./Humi. : 21.5°C / 50%
 Engineer : Czerny Lin
 Test Voltage : AC 120V/60Hz



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dBμV	Factor dB	Actual FS dBμV	Limit dBμV	Margin dB
0.164	QP	30.24	0.19	30.43	65.26	-34.83
0.164	Average	17.50	0.19	17.69	55.26	-37.57
0.187	QP	28.34	0.19	28.53	64.19	-35.66
0.187	Average	14.76	0.19	14.95	54.19	-39.24
0.463	QP	22.98	0.19	23.17	56.63	-33.46
0.463	Average	16.75	0.19	16.94	46.63	-29.69
0.936	QP	18.76	0.21	18.97	56.00	-37.03
0.936	Average	11.35	0.21	11.56	46.00	-34.44
1.884	QP	14.95	0.26	15.21	56.00	-40.79
1.884	Average	8.23	0.26	8.49	46.00	-37.51
11.816	QP	29.67	0.42	30.09	60.00	-29.91
11.816	Average	22.42	0.42	22.84	50.00	-27.16

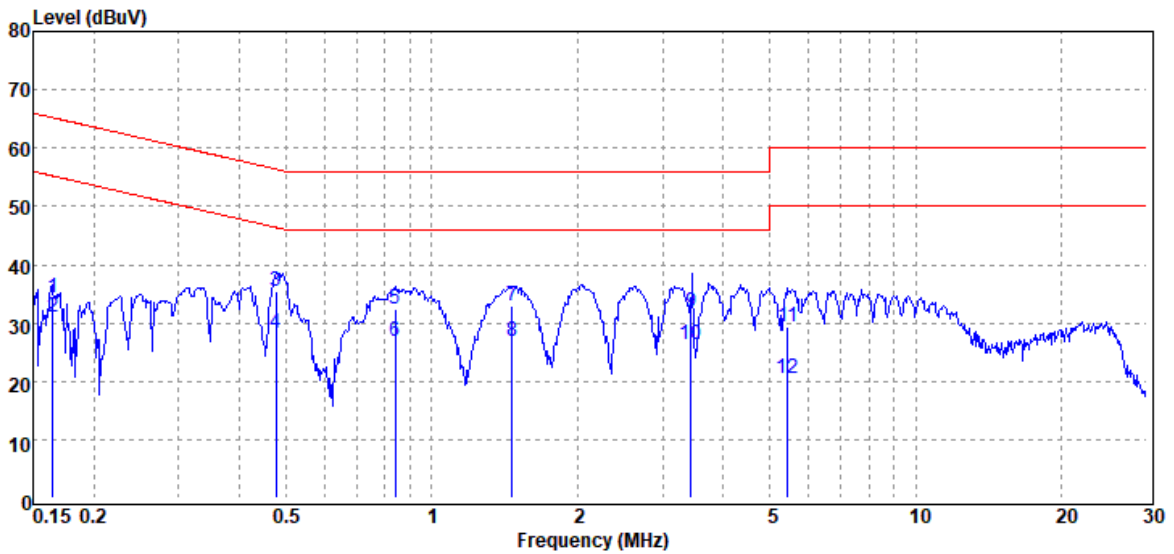
Note: 1. Actual FS= Spectrum Read Level + Factor

Note: 2. Margin= Actual FS - Limit

Report No.: TMWK2402000497KR

Project No : TM-2311000354P
 Operation Mode : BT
 Test Chamber : Conduction
 Probe : LINE
 Note : Mode 2

Test Date : 2024-04-08
 Temp./Humi. : 21.5°C / 50%
 Engineer : Czerny Lin
 Test Voltage : AC 230V/50Hz



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dBμV	Factor dB	Actual FS dBμV	Limit dBμV	Margin dB
0.165	QP	34.14	0.15	34.29	65.23	-30.94
0.165	Average	30.72	0.15	30.87	55.23	-24.36
0.477	QP	35.17	0.15	35.32	56.40	-21.08
0.477	Average	28.13	0.15	28.28	46.40	-18.12
0.842	QP	32.18	0.16	32.34	56.00	-23.66
0.842	Average	26.83	0.16	26.99	46.00	-19.01
1.467	QP	32.65	0.19	32.84	56.00	-23.16
1.467	Average	26.53	0.19	26.72	46.00	-19.28
3.438	QP	31.63	0.26	31.89	56.00	-24.11
3.438	Average	25.90	0.26	26.16	46.00	-19.84
5.432	QP	29.08	0.29	29.37	60.00	-30.63
5.432	Average	20.29	0.29	20.58	50.00	-29.42

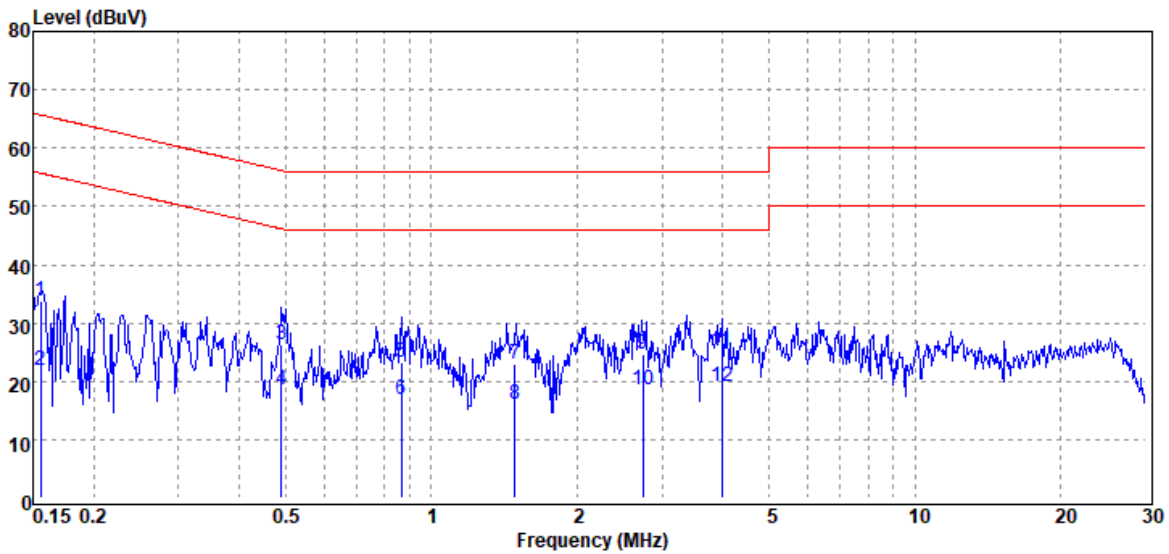
Note: 1. Actual FS= Spectrum Read Level + Factor

Note: 2. Margin= Actual FS - Limit

Report No.: TMWK2402000497KR

Project No : TM-2311000354P
 Operation Mode : BT
 Test Chamber : Conduction
 Probe : NEUTRAL
 Note : Mode 2

Test Date : 2024-04-08
 Temp./Humi. : 21.5°C / 50%
 Engineer : Czerny Lin
 Test Voltage : AC 230V/50Hz



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dB μ V	Factor dB	Actual FS dB μ V	Limit dB μ V	Margin dB
0.155	QP	33.67	0.20	33.87	65.70	-31.83
0.155	Average	21.77	0.20	21.97	55.70	-33.73
0.490	QP	26.17	0.19	26.36	56.16	-29.80
0.490	Average	18.44	0.19	18.63	46.16	-27.53
0.865	QP	23.03	0.21	23.24	56.00	-32.76
0.865	Average	16.71	0.21	16.92	46.00	-29.08
1.488	QP	22.66	0.24	22.90	56.00	-33.10
1.488	Average	15.93	0.24	16.17	46.00	-29.83
2.734	QP	24.31	0.28	24.59	56.00	-31.41
2.734	Average	18.14	0.28	18.42	46.00	-27.58
3.987	QP	24.96	0.31	25.27	56.00	-30.73
3.987	Average	18.78	0.31	19.09	46.00	-26.91

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

Note: 2. Margin= Actual FS - Limit

Report No.: TMWK2402000497KR

4.2 OUTPUT POWER MEASUREMENT

4.2.1 Test Limit

According to §15.247(a)(1) and RSS-247 section 5.4(b)

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.

IC

According to RSS-247 section 5.4(b), For FHSs operating in the band 2400-2483.5 MHz, the maximum peak conducted output power shall not exceed 1.0 W if the hopset uses 75 or more hopping channels; the maximum peak conducted output power shall not exceed 0.125 W if the hopset uses less than 75 hopping channels. The e.i.r.p. shall not exceed 4 W, except as provided in section 5.4(e).

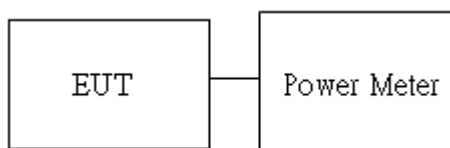
Limit	<input checked="" type="checkbox"/> Antenna not exceed 6 dBi : 21dBm <input type="checkbox"/> Antenna with DG greater than 6 dBi : 21dBm [Limit = 30 – (DG – 6)]
-------	---

Average output power : For reporting purposes only.

4.2.2 Test Procedure

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

4.2.3 Test Setup



4.2.4 Test Result

Temperature: 21.8°C

Test date: December 7, 2023

Humidity: 53% RH

Tested by: Marco Chan

Peak & Average output power :

1M BR mode (Peak):

CH	Freq. (MHz)	Power set	Peak Output Power (dBm)	Output Power (mW)	Limit (mW)
Low	2402	9	7.63	5.794	1000
Mid	2441	9	6.81	4.797	1000
High	2480	9	6.86	4.853	1000

1M BR mode (Average):

CH	Freq. (MHz)	Power set	Avg. Output Power (dBm)	Output Power (mW)	Limit (mW)
Low	2402	9	7.55	5.690	1000
Mid	2441	9	6.79	4.777	1000
High	2480	9	6.80	4.788	1000

2M EDR mode (Peak):

CH	Freq. (MHz)	Power set	Peak Output Power (dBm)	Output Power (mW)	Limit (mW)
Low	2402	9	8.24	6.668	125
Mid	2441	9	7.56	5.702	125
High	2480	9	7.54	5.675	125

2M EDR mode (Average):

CH	Freq. (MHz)	Power set	Avg. Output Power (dBm)	Output Power (mW)	Limit (mW)
Low	2402	9	6.83	4.818	125
Mid	2441	9	5.80	3.801	125
High	2480	9	5.92	3.907	125

3M EDR mode (Peak):

CH	Freq. (MHz)	Power set	Peak Output Power (dBm)	Output Power (mW)	Limit (mW)
Low	2402	9	8.47	7.031	125
Mid	2441	9	7.85	6.095	125
High	2480	9	7.79	6.012	125

3M EDR mode (Average):

CH	Freq. (MHz)	Power set	Avg. Output Power (dBm)	Output Power (mW)	Limit (mW)
Low	2402	9	6.85	4.840	125
Mid	2441	9	5.82	3.818	125
High	2480	9	5.91	3.898	125

***Note: Max. Output include tune up tolerance Power measured by using average detector.**

Report No.: TMWK2402000497KR

EIRP Power:

1M BR mode EIRP

Channel	Frequency (MHz)	Power set	Avg. Output Power (dBm)	Antenna Gain (dBi)	EIRP (mW)	Limit (mW)
Low	2402	9	7.55	0.44	6.297	4000
Mid	2441	9	6.79	0.44	5.286	4000
High	2480	9	6.80	0.44	5.298	4000

2M EDR mode EIRP

Channel	Frequency (MHz)	Power set	Avg. Output Power (dBm)	Antenna Gain (dBi)	EIRP (mW)	Limit (mW)
Low	2402	9	6.83	0.44	5.331	4000
Mid	2441	9	5.80	0.44	4.206	4000
High	2480	9	5.92	0.44	4.324	4000

3M EDR mode EIRP

Channel	Frequency (MHz)	Power set	Avg. Output Power (dBm)	Antenna Gain (dBi)	EIRP (mW)	Limit (mW)
Low	2402	9	6.85	0.44	5.356	4000
Mid	2441	9	5.82	0.44	4.225	4000
High	2480	9	5.91	0.44	4.314	4000

* **Note:** EIRP = Average Power + Gain

Report No.: TMWK2402000497KR

4.3 RADIATION BANDEDGE AND SPURIOUS EMISSION

4.3.1 Test Limit

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

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

Below 30 MHz

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

Above 30 MHz

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

Remark:

Although these tests were performed other than open area test site, adequate comparison measurements were confirmed against 30 m open 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.

Report No.: TMWK2402000497KR

IC according to RSS-247 section 5.5, RSS-Gen, Section 8.9 and 8.10

RSS-Gen Table 3 and Table 5 – General Field Strength Limits for Transmitters and Receivers at Frequencies Above 30 MHz ^(Note)

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)

Note: Measurements for compliance with the limits in table 3 may be performed at distances other than 3 metres, in accordance with Section 6.6.

RSS-Gen Table 6: General Field Strength Limits for Transmitters at Frequencies Below 30 MHz (Transmit)

Frequency	Magnetic field strength (H-Field) ($\mu\text{A/m}$)	Measurement Distance (m)
9-490 kHz ^{Note}	6.37/F (F in kHz)	300
490-1,705 kHz	63.7/F (F in kHz)	30
1.705-30 MHz	0.08	30

Note: The emission limits for the ranges 9-90 kHz and 110-490 kHz are based on measurements employing a linear average detector.

Report No.: TMWK2402000497KR

4.3.2 Test Procedure

1. The EUT is placed on a turntable, Above 1 GHz is 1.5m and below 1 GHz is 0.8m above ground plane. The EUT Configured un accordance with ANSI C63.10: 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.

Note: No emission found between lowest internal used/generated frequency to 30MHz(9KHz~30MHz)

4. 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 \geq 1/T.

5. Data result

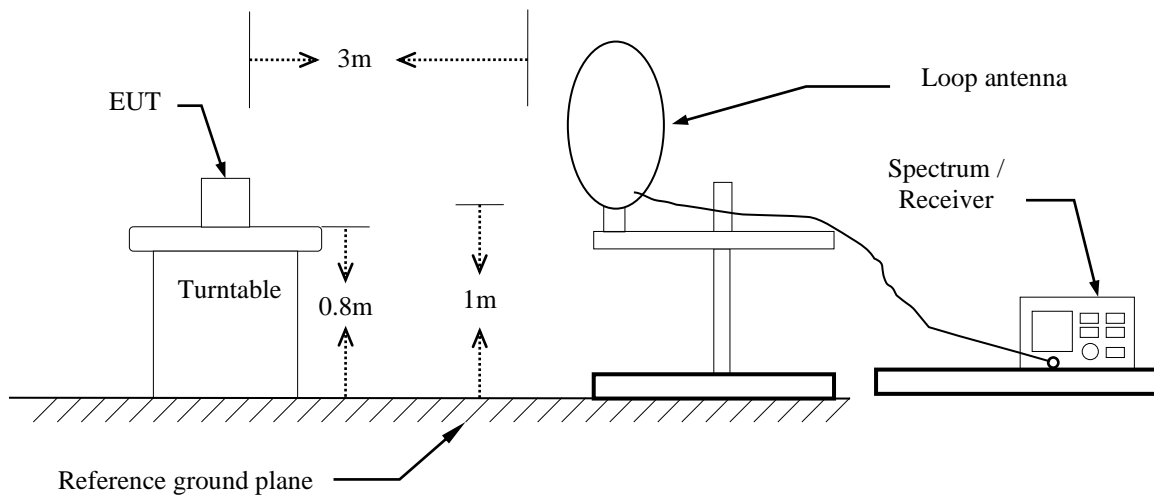
Actual FS=Spectrum Reading Level + Factor

Margin=Actual FS- Limit

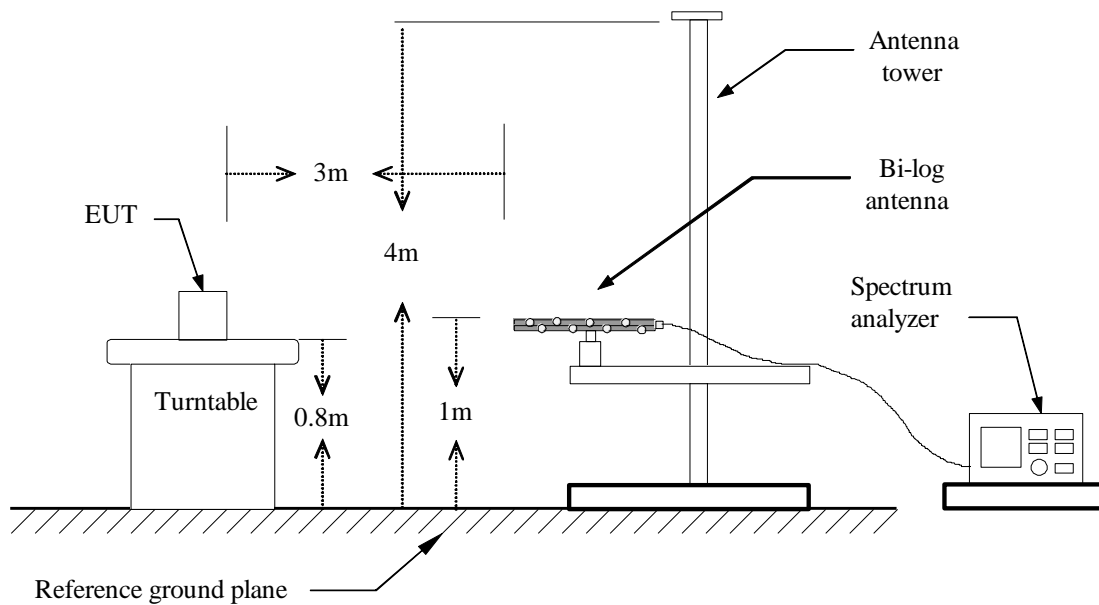
Report No.: TMWK2402000497KR

4.3.3 Test Setup

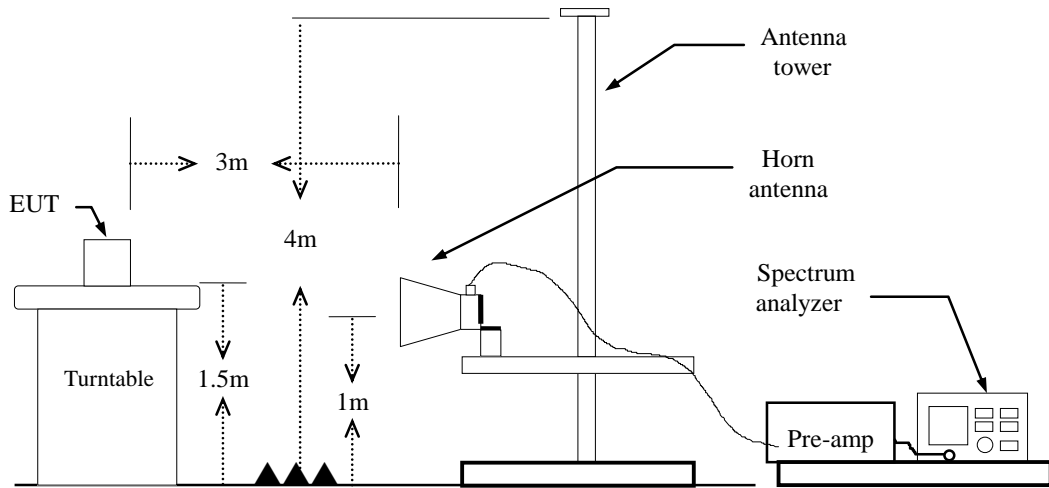
9kHz ~ 30MHz



30MHz ~ 1GHz



Above 1 GHz

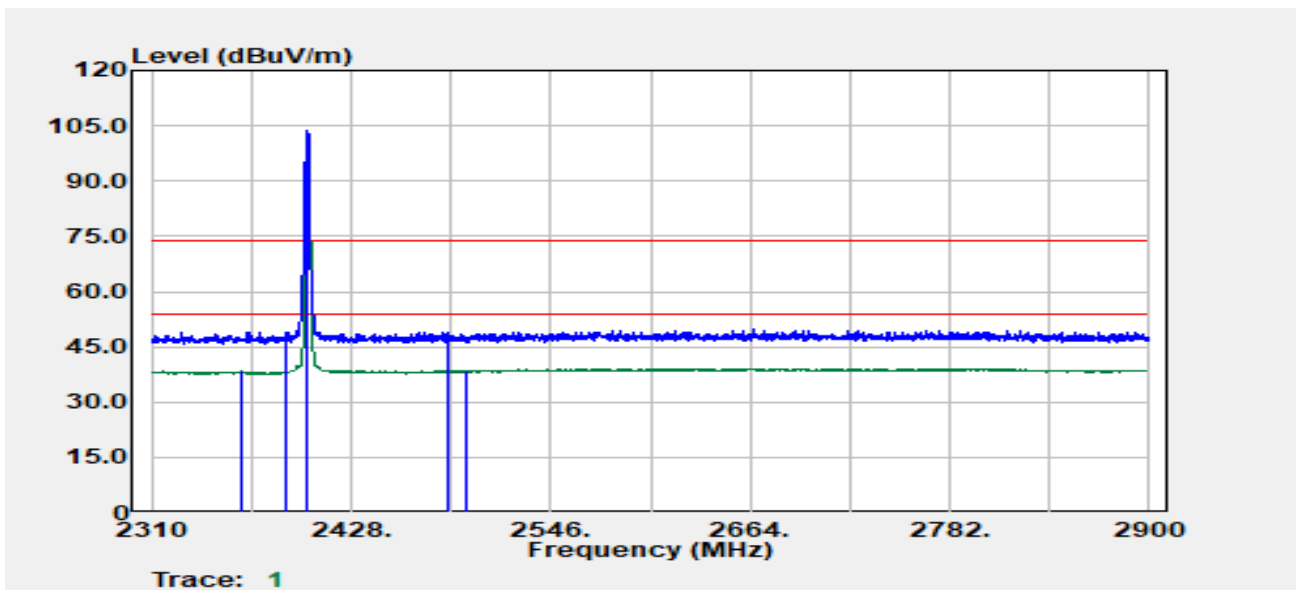


Report No.: TMWK2402000497KR

4.3.4 Test Result

Band Edge Test Data

Project No	:TM-2311000354P	Test Date	:2024-02-26
Operation Band	:BT_BR	Temp./Humi.	:24.4/58
Frequency	:2402 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:Bandedge	Engineer	:Tony Chao
EUT Pol	:H	Test Chamber	: 966A
Setting	:		

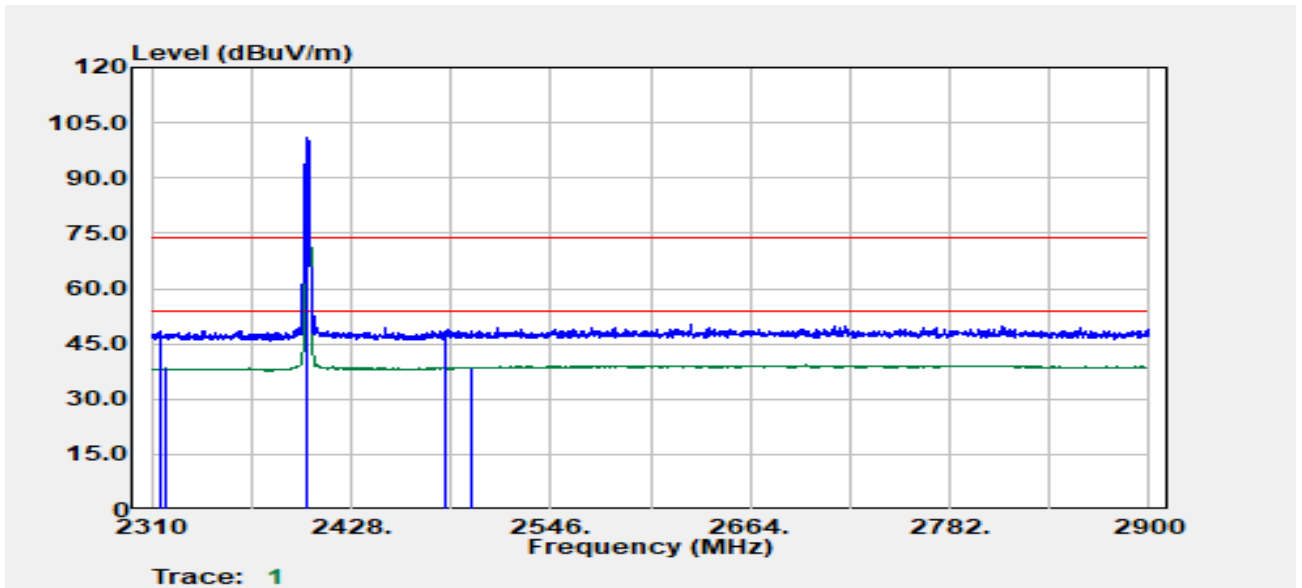


Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dBμV	Factor dB	Actual FS dBμV/m	Limit dBμV/m	Margin dB
2363.77	Average	32.18	6.22	38.39	54.00	-15.61
2390.00	Peak	42.65	6.28	48.93	74.00	-25.07
2402.00	Peak	97.53	6.29	103.82	--	--
2402.00	Average	97.25	6.29	103.54	--	--
2484.82	Peak	42.00	6.73	48.73	74.00	-25.27
2495.33	Average	31.78	6.82	38.61	54.00	-15.39

Report No.: TMWK2402000497KR

Project No :TM-2311000354P
 Operation Band :BT_BR
 Frequency :2402 MHz
 Operation Mode :Bandedge
 EUT Pol :H
 Setting :

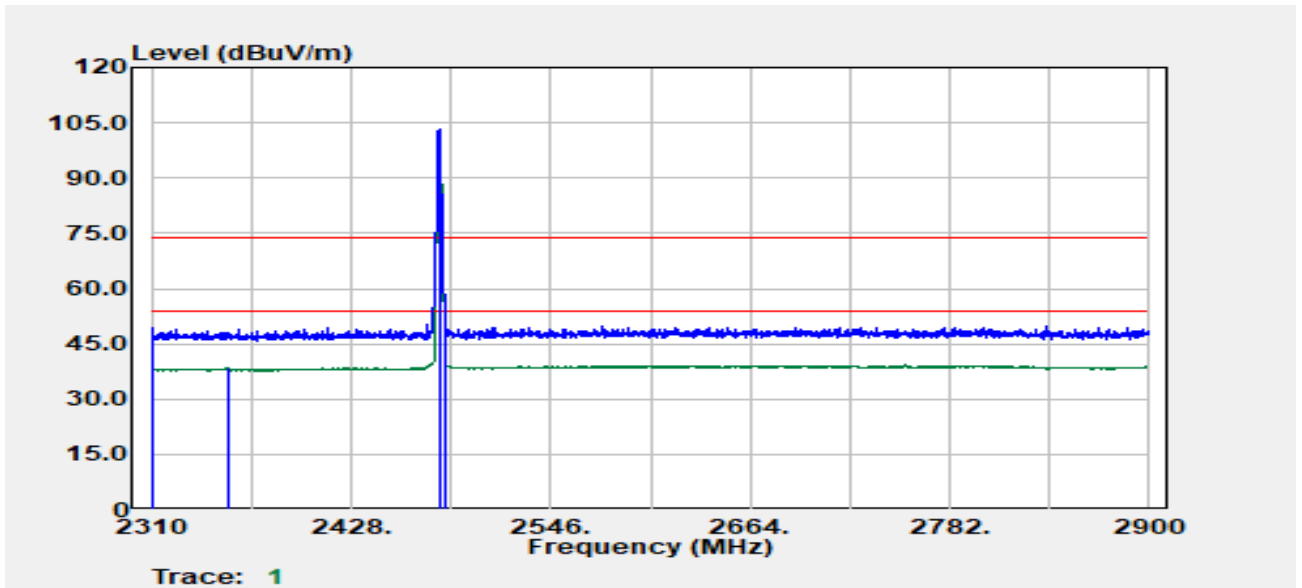
Test Date :2024-02-26
 Temp./Humi. :24.4/58
 Antenna Pol. :HORIZONTAL
 Engineer :Tony Chao
 Test Chamber : 966A



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dB μ V	Factor dB	Actual FS dB μ V/m	Limit dB μ V/m	Margin dB
2314.50	Peak	42.46	6.14	48.60	74.00	-25.40
2319.00	Average	32.22	6.15	38.37	54.00	-15.63
2402.00	Peak	94.83	6.29	101.13	--	--
2402.00	Average	94.82	6.29	101.11	--	--
2483.50	Peak	42.36	6.71	49.08	74.00	-24.92
2499.83	Average	31.79	6.84	38.63	54.00	-15.37

Report No.: TMWK2402000497KR

Project No	:TM-2311000354P	Test Date	:2024-02-26
Operation Band	:BT_BR	Temp./Humi.	:24.4/58
Frequency	:2480 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:Bandedge	Engineer	:Tony Chao
EUT Pol	:H	Test Chamber	: 966A
Setting	:		

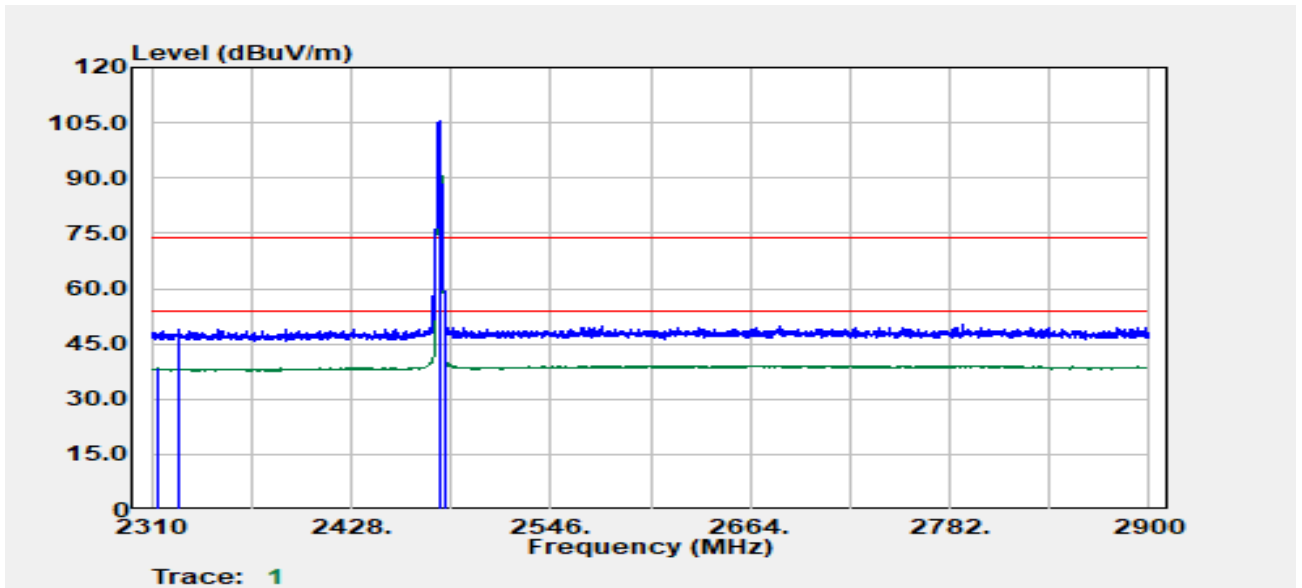


Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dB μ V	Factor dB	Actual FS dB μ V/m	Limit dB μ V/m	Margin dB
2310.00	Peak	43.15	6.13	49.28	74.00	-24.72
2356.02	Average	32.09	6.25	38.34	54.00	-15.66
2480.00	Peak	96.53	6.67	103.20	--	--
2480.00	Average	96.37	6.67	103.03	--	--
2483.57	Average	37.72	6.72	44.43	54.00	-9.57
2483.82	Peak	45.22	6.72	51.93	74.00	-22.07

Report No.: TMWK2402000497KR

Project No :TM-2311000354P
 Operation Band :BT_BR
 Frequency :2480 MHz
 Operation Mode :Bandedge
 EUT Pol :H
 Setting :

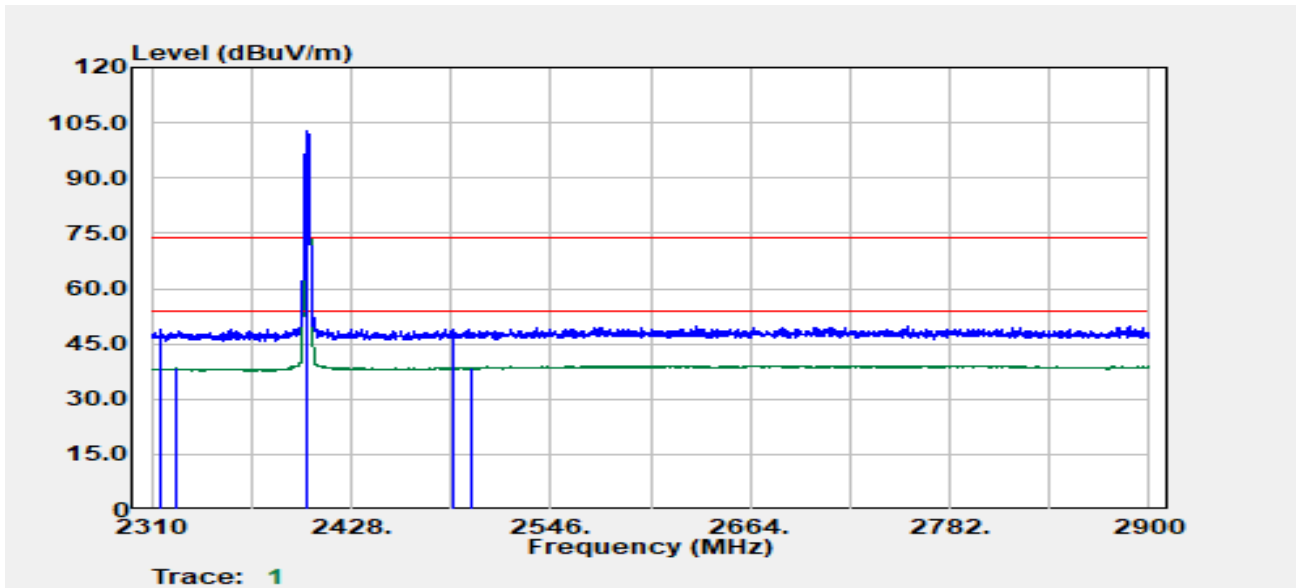
Test Date :2024-02-26
 Temp./Humi. :24.4/58
 Antenna Pol. :HORIZONTAL
 Engineer :Tony Chao
 Test Chamber : 966A



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dB μ V	Factor dB	Actual FS dB μ V/m	Limit dB μ V/m	Margin dB
2313.50	Average	32.19	6.14	38.33	54.00	-15.67
2326.01	Peak	42.83	6.17	49.00	74.00	-25.00
2480.00	Peak	98.89	6.67	105.55	--	--
2480.00	Average	98.83	6.67	105.49	--	--
2483.57	Average	39.57	6.72	46.28	54.00	-7.72
2483.82	Peak	48.69	6.72	55.41	74.00	-18.59

Report No.: TMWK2402000497KR

Project No	:TM-2311000354P	Test Date	:2024-02-26
Operation Band	:BT_EDR	Temp./Humi.	:24.4/58
Frequency	:2402 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:Bandedge	Engineer	:Tony Chao
EUT Pol	:H	Test Chamber	: 966A
Setting	:		

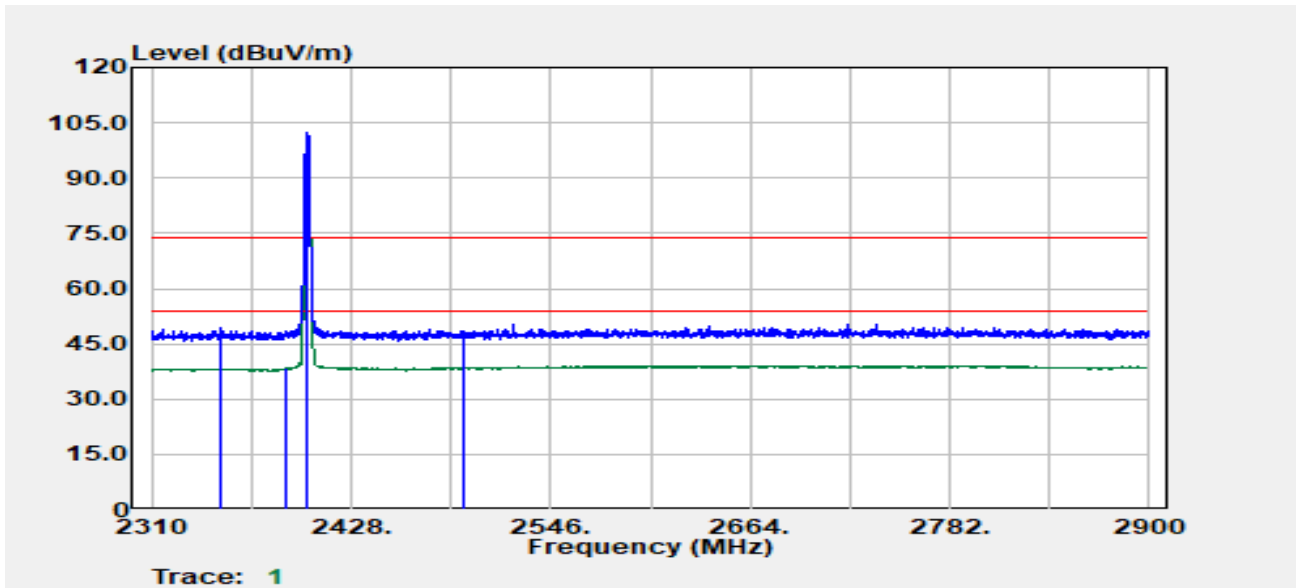


Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dB μ V	Factor dB	Actual FS dB μ V/m	Limit dB μ V/m	Margin dB
2315.75	Peak	42.83	6.14	48.98	74.00	-25.02
2324.51	Average	32.32	6.17	38.49	54.00	-15.51
2402.00	Peak	96.43	6.29	102.73	--	--
2402.00	Average	93.96	6.29	100.25	--	--
2488.83	Peak	42.09	6.79	48.88	74.00	-25.12
2499.08	Average	31.77	6.84	38.60	54.00	-15.40

Report No.: TMWK2402000497KR

Project No :TM-2311000354P
 Operation Band :BT_EDR
 Frequency :2402 MHz
 Operation Mode :Bandedge
 EUT Pol :H
 Setting :

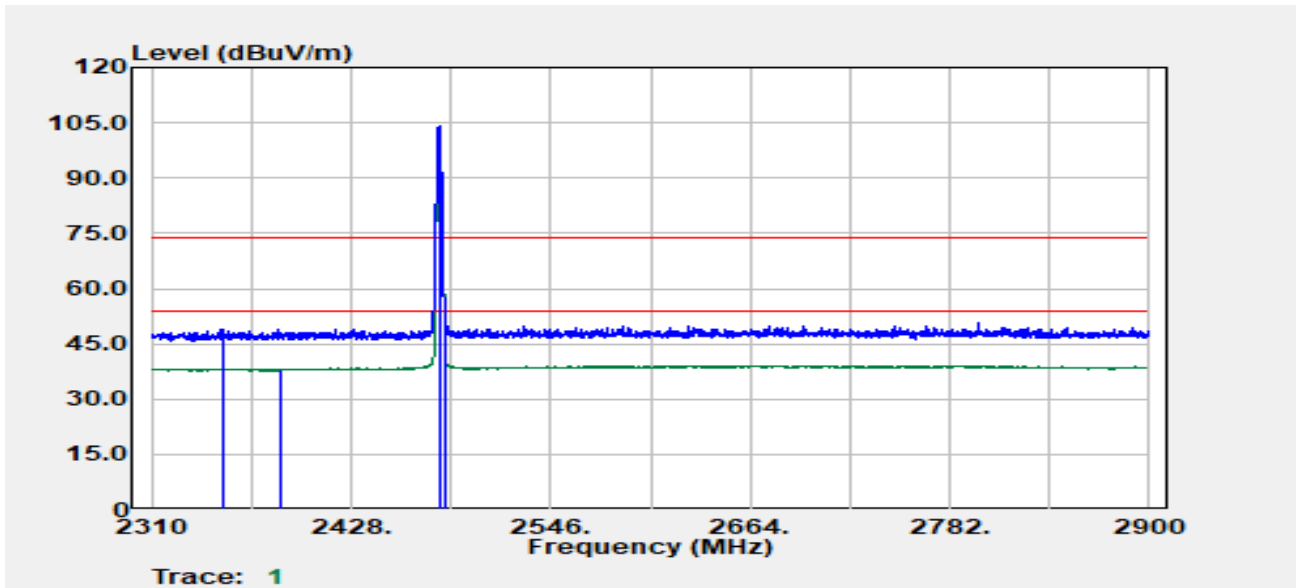
Test Date :2024-02-26
 Temp./Humi. :24.4/58
 Antenna Pol. :HORIZONTAL
 Engineer :Tony Chao
 Test Chamber : 966A



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dB μ V	Factor dB	Actual FS dB μ V/m	Limit dB μ V/m	Margin dB
2350.52	Peak	42.94	6.24	49.18	74.00	-24.82
2389.78	Average	32.14	6.28	38.42	54.00	-15.58
2402.00	Peak	96.16	6.29	102.46	--	--
2402.00	Average	93.69	6.29	99.98	--	--
2494.58	Peak	41.69	6.82	48.51	74.00	-25.49
2494.83	Average	31.80	6.82	38.62	54.00	-15.38

Report No.: TMWK2402000497KR

Project No	:TM-2311000354P	Test Date	:2024-02-26
Operation Band	:BT_EDR	Temp./Humi.	:24.4/58
Frequency	:2480 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:Bandedge	Engineer	:Tony Chao
EUT Pol	:H	Test Chamber	: 966A
Setting	:		

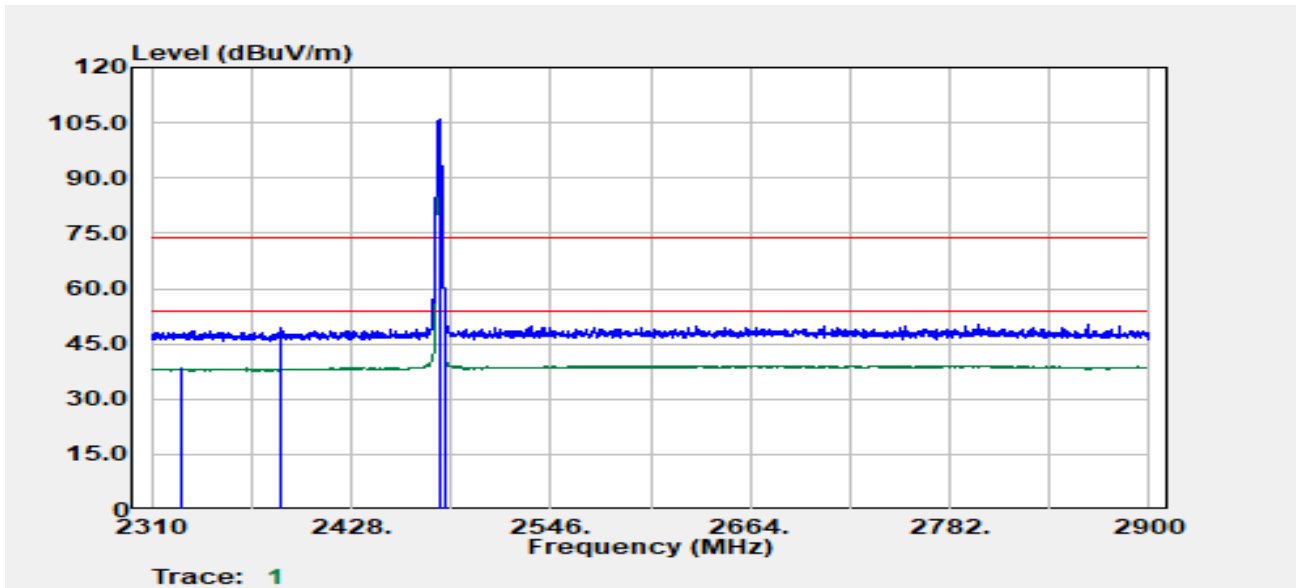


Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dBμV	Factor dB	Actual FS dBμV/m	Limit dBμV/m	Margin dB
2352.77	Peak	42.55	6.24	48.80	74.00	-25.20
2386.28	Average	32.02	6.20	38.22	54.00	-15.78
2480.00	Peak	97.59	6.67	104.26	--	--
2480.00	Average	95.02	6.67	101.68	--	--
2483.57	Peak	47.27	6.72	53.99	74.00	-20.01
2483.57	Average	39.75	6.72	46.47	54.00	-7.53

Report No.: TMWK2402000497KR

Project No :TM-2311000354P
 Operation Band :BT_EDR
 Frequency :2480 MHz
 Operation Mode :Bandedge
 EUT Pol :H
 Setting :

Test Date :2024-02-26
 Temp./Humi. :24.4/58
 Antenna Pol. :HORIZONTAL
 Engineer :Tony Chao
 Test Chamber : 966A

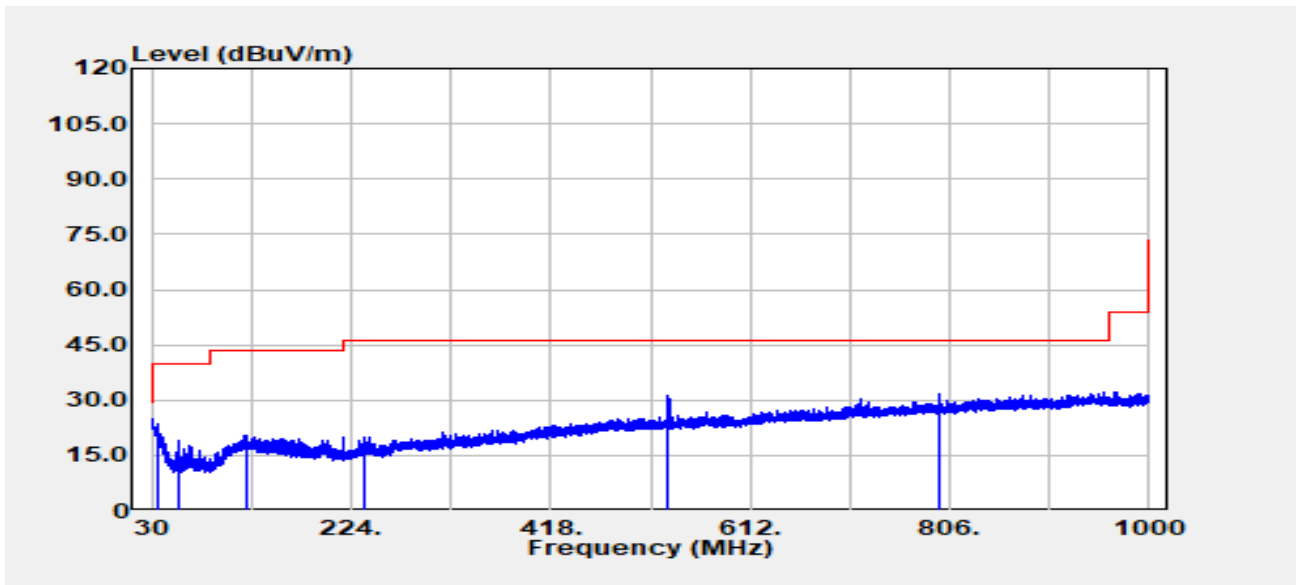


Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dB μ V	Factor dB	Actual FS dB μ V/m	Limit dB μ V/m	Margin dB
2327.01	Average	32.09	6.18	38.27	54.00	-15.73
2386.03	Peak	42.99	6.20	49.19	74.00	-24.81
2480.00	Peak	99.30	6.67	105.96	--	--
2480.00	Average	96.69	6.67	103.35	--	--
2483.57	Peak	48.02	6.72	54.73	74.00	-19.27
2483.57	Average	41.19	6.72	47.90	54.00	-6.10

Report No.: TMWK2402000497KR

TX Test Data

Project No	:TM-2311000354P	Test Date	:2024-02-27
Operation Band	:BT EDR	Temp./Humi.	:24.4/58
Frequency	:2480 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:TX	Engineer	:Ray Li
EUT Pol	:H	Test Chamber	: 966A
Setting	:		

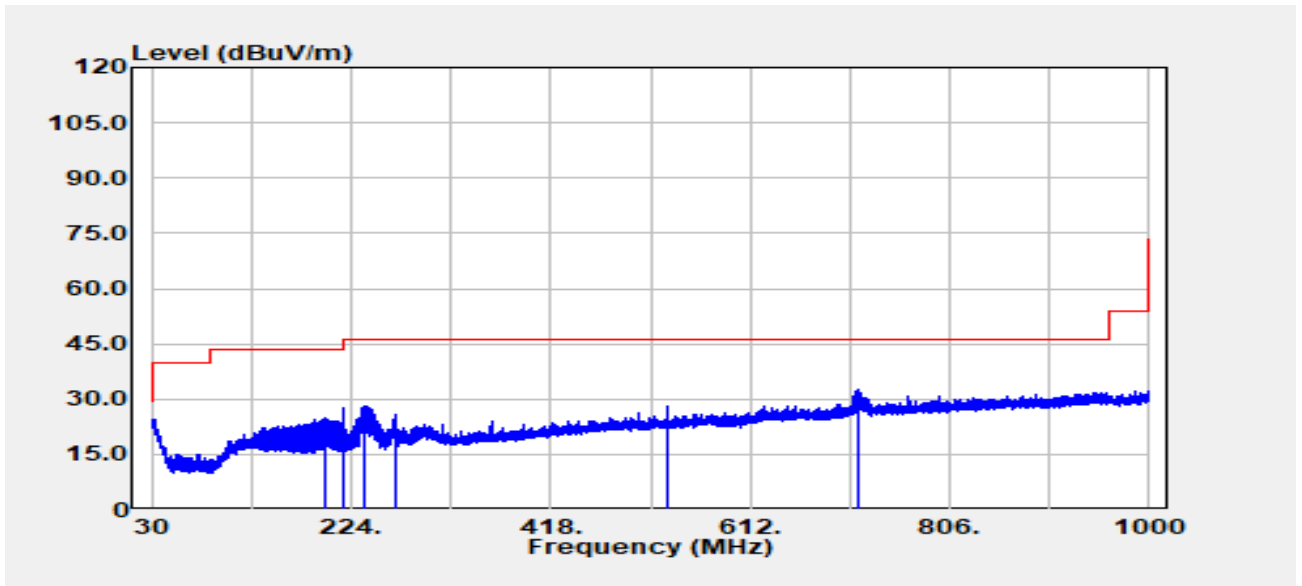


Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dB μ V	Factor dB	Actual FS dB μ V/m	Limit dB μ V/m	Margin dB
35.20	Peak	29.53	-5.95	23.58	40.00	-16.42
55.30	Peak	35.23	-16.11	19.11	40.00	-20.89
123.40	Peak	29.45	-9.05	20.40	43.50	-23.10
236.90	Peak	30.86	-10.78	20.08	46.00	-25.92
532.70	Peak	34.27	-2.95	31.31	46.00	-14.69
796.00	Peak	30.14	1.46	31.59	46.00	-14.41

Report No.: TMWK2402000497KR

Project No :TM-2311000354P
 Operation Band :BT EDR
 Frequency :2480 MHz
 Operation Mode :TX
 EUT Pol :H
 Setting :

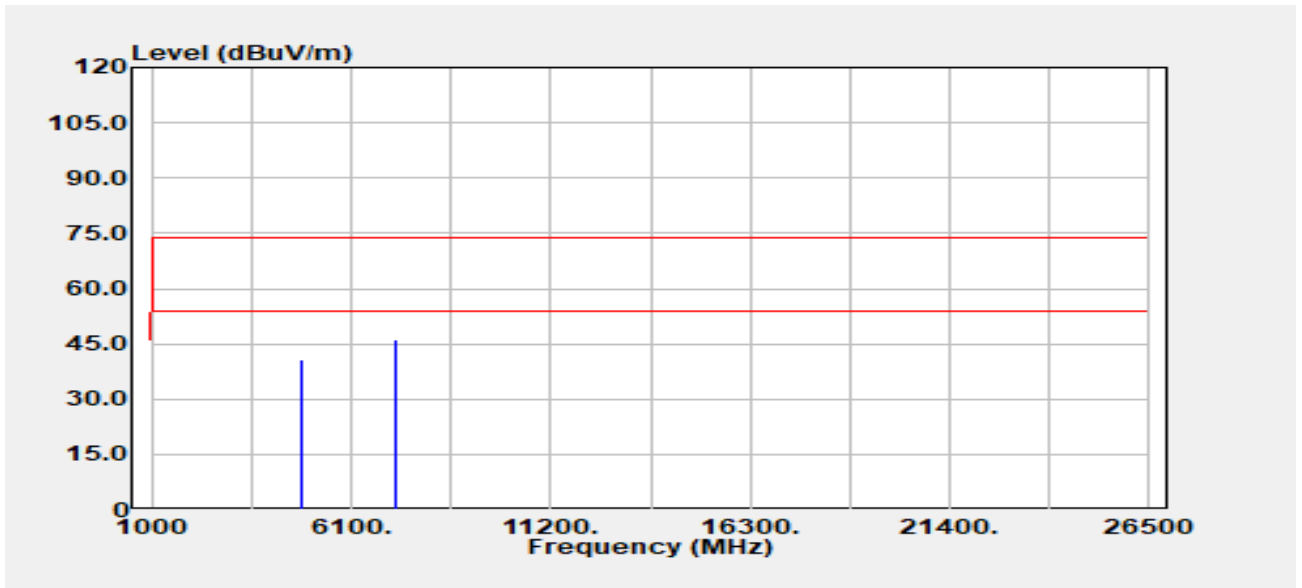
Test Date :2024-02-27
 Temp./Humi. :24.4/58
 Antenna Pol. :HORIZONTAL
 Engineer :Ray Li
 Test Chamber : 966A



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dBuV	Factor dB	Actual FS dBuV/m	Limit dBuV/m	Margin dB
197.90	Peak	34.92	-10.05	24.87	43.50	-18.63
216.00	Peak	39.60	-11.79	27.81	43.50	-15.69
237.70	Peak	39.02	-10.73	28.29	46.00	-17.71
266.40	Peak	35.14	-9.31	25.83	46.00	-20.17
531.00	Peak	31.14	-2.96	28.18	46.00	-17.82
717.80	Peak	32.31	0.35	32.66	46.00	-13.34

Report No.: TMWK2402000497KR

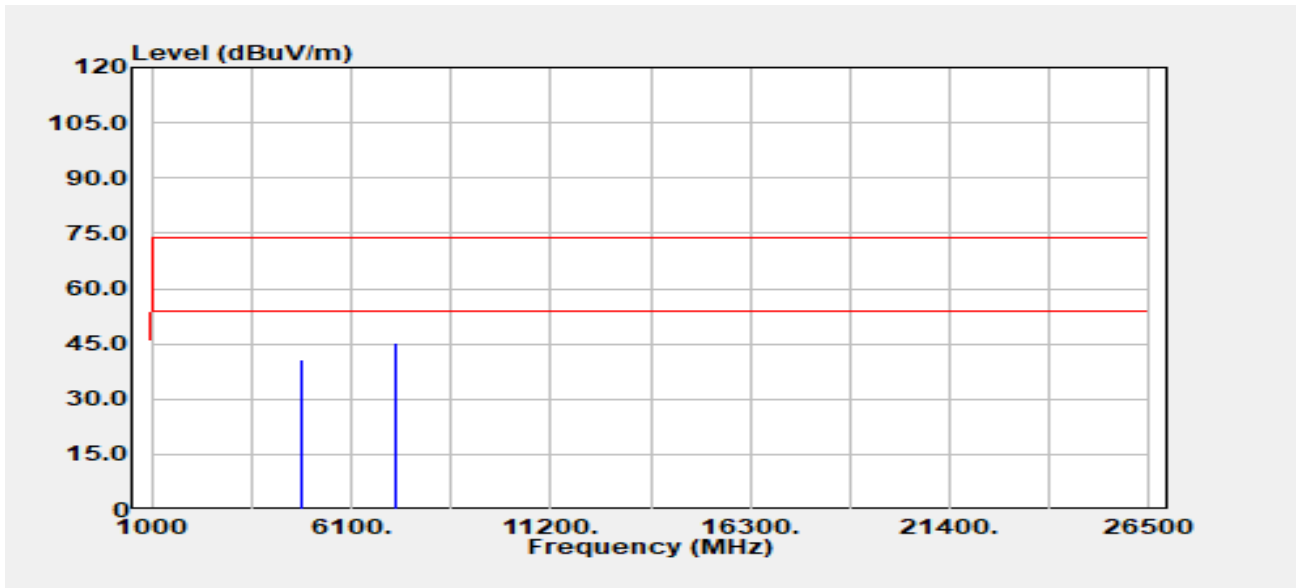
Project No	:TM-2311000354P	Test Date	:2024-02-26
Operation Band	:BT BR	Temp./Humi.	:24.4/58
Frequency	:2402 MHz	Antenna Pol.	:Vertical
Operation Mode	:TX	Engineer	:Ray Li
EUT Pol	:H	Test Chamber	: 966A
Setting	:		



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dBuV	Factor dB	Actual FS dBuV/m	Limit dBuV/m	Margin dB
4804.00	Peak	38.39	2.23	40.61	74.00	-33.39
4804.00	Average	31.15	2.23	33.38	54.00	-20.62
7206.00	Peak	37.39	9.01	46.40	74.00	-27.60
7206.00	Average	29.00	9.01	38.01	54.00	-15.99

Report No.: TMWK2402000497KR

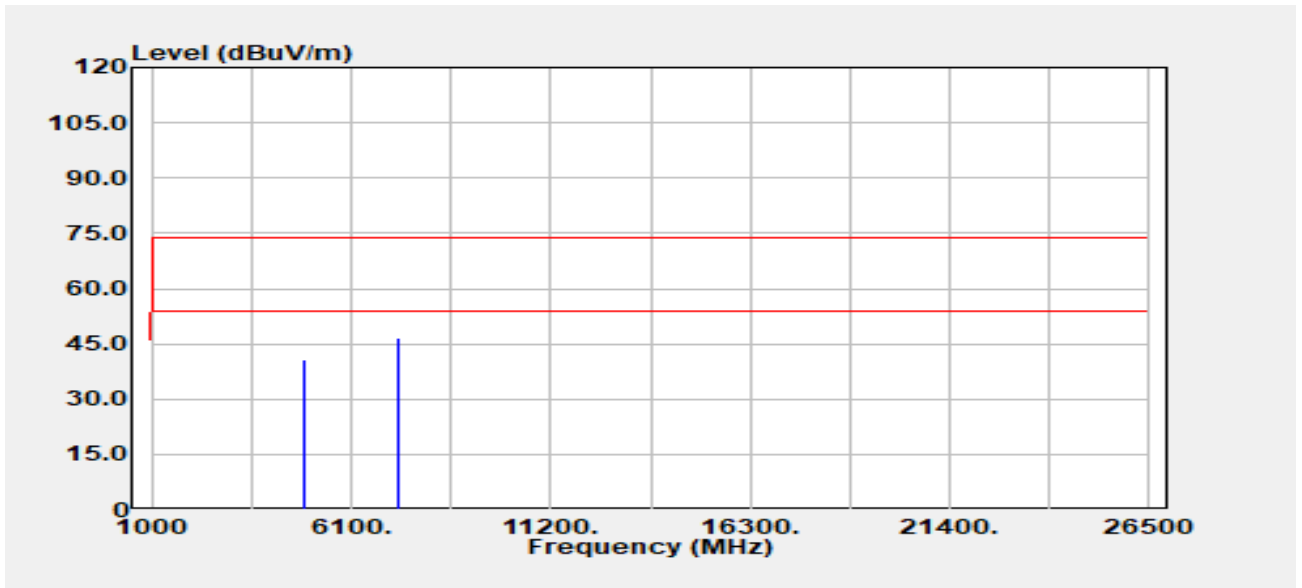
Project No	:TM-2311000354P	Test Date	:2024-02-26
Operation Band	:BT BR	Temp./Humi.	:24.4/58
Frequency	:2402 MHz	Antenna Pol.	:Horizontal
Operation Mode	:TX	Engineer	:Ray Li
EUT Pol	:H	Test Chamber	: 966A
Setting	:		



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dBuV	Factor dB	Actual FS dBuV/m	Limit dBuV/m	Margin dB
4804.00	Peak	38.35	2.23	40.58	74.00	-33.42
4804.00	Average	33.08	2.23	35.30	54.00	-18.70
7206.00	Peak	36.17	9.01	45.18	74.00	-28.82
7206.00	Average	28.35	9.01	37.36	54.00	-16.64

Report No.: TMWK2402000497KR

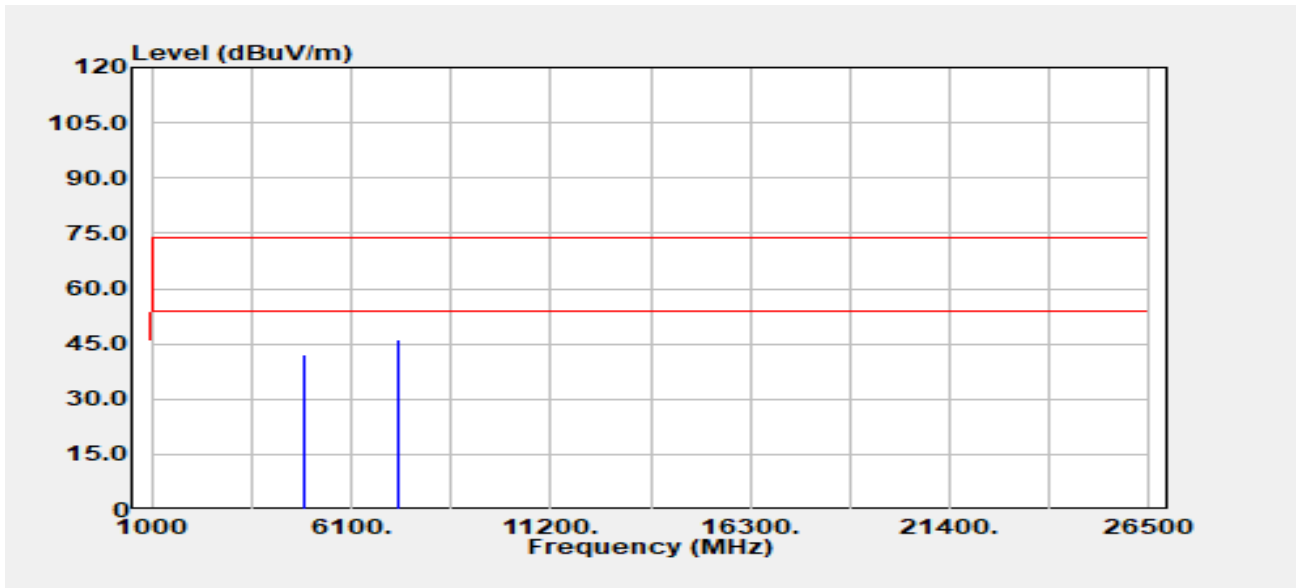
Project No	:TM-2311000354P	Test Date	:2024-02-26
Operation Band	:BT BR	Temp./Humi.	:24.4/58
Frequency	:2441 MHz	Antenna Pol.	:Vertical
Operation Mode	:TX	Engineer	:Ray Li
EUT Pol	:H	Test Chamber	: 966A
Setting	:		



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dBuV	Factor dB	Actual FS dBuV/m	Limit dBuV/m	Margin dB
4882.00	Peak	38.13	2.56	40.70	74.00	-33.30
4882.00	Average	31.34	2.56	33.91	54.00	-20.09
7323.00	Peak	37.68	8.96	46.63	74.00	-27.37
7323.00	Average	26.83	8.96	35.79	54.00	-18.21

Report No.: TMWK2402000497KR

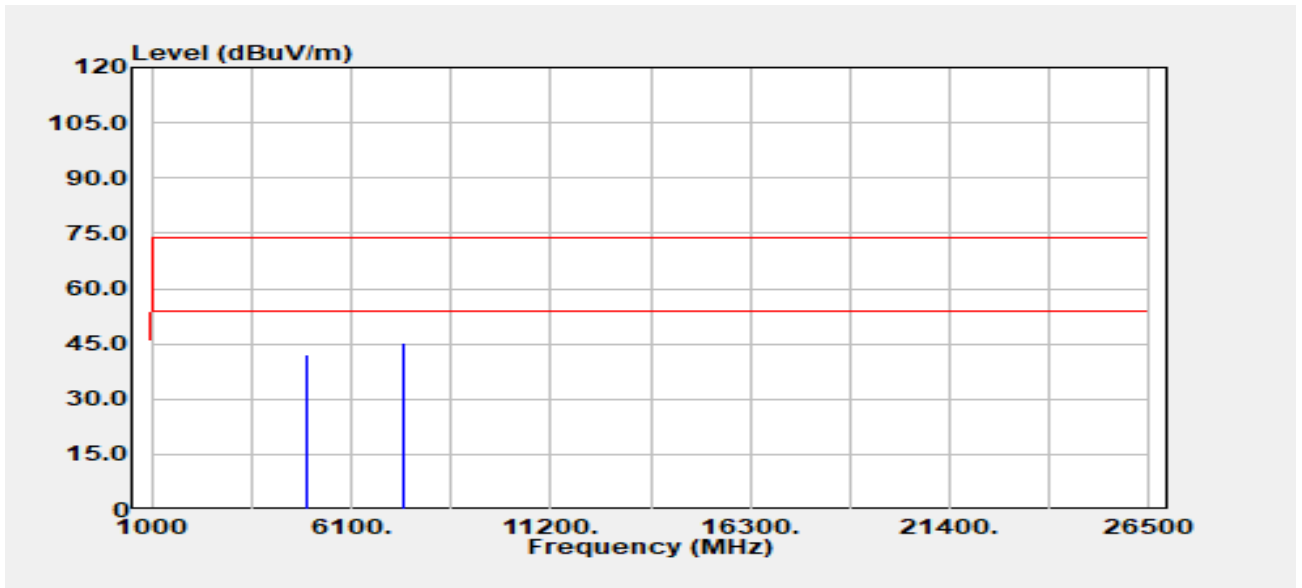
Project No	:TM-2311000354P	Test Date	:2024-02-26
Operation Band	:BT BR	Temp./Humi.	:24.4/58
Frequency	:2441 MHz	Antenna Pol.	:Horizontal
Operation Mode	:TX	Engineer	:Ray Li
EUT Pol	:H	Test Chamber	: 966A
Setting	:		



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dBuV	Factor dB	Actual FS dBuV/m	Limit dBuV/m	Margin dB
4882.00	Peak	39.70	2.56	42.26	74.00	-31.74
4882.00	Average	35.15	2.56	37.72	54.00	-16.28
7323.00	Peak	37.13	8.96	46.09	74.00	-27.91
7323.00	Average	26.85	8.96	35.81	54.00	-18.19

Report No.: TMWK2402000497KR

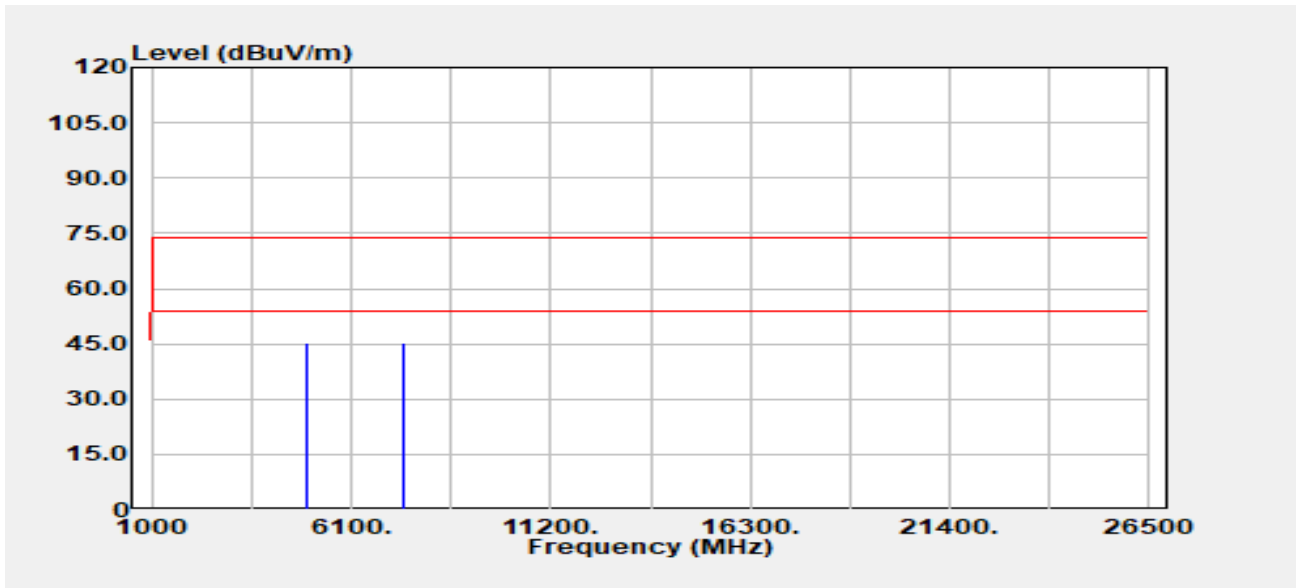
Project No	:TM-2311000354P	Test Date	:2024-02-26
Operation Band	:BT BR	Temp./Humi.	:24.4/58
Frequency	:2480 MHz	Antenna Pol.	:Vertical
Operation Mode	:TX	Engineer	:Ray Li
EUT Pol	:H	Test Chamber	: 966A
Setting	:		



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dBuV	Factor dB	Actual FS dBuV/m	Limit dBuV/m	Margin dB
4960.00	Peak	39.04	3.21	42.25	74.00	-31.75
4960.00	Average	34.58	3.21	37.80	54.00	-16.20
7440.00	Peak	36.55	8.92	45.47	74.00	-28.53
7440.00	Average	27.55	8.92	36.47	54.00	-17.53

Report No.: TMWK2402000497KR

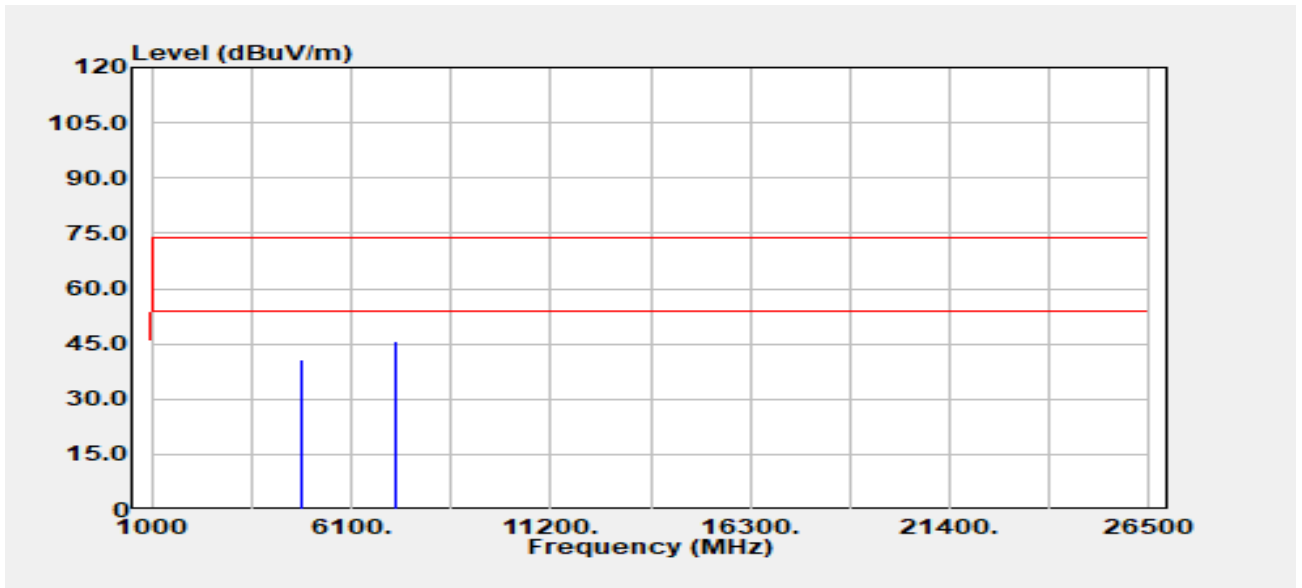
Project No	:TM-2311000354P	Test Date	:2024-02-26
Operation Band	:BT BR	Temp./Humi.	:24.4/58
Frequency	:2480 MHz	Antenna Pol.	:Horizontal
Operation Mode	:TX	Engineer	:Ray Li
EUT Pol	:H	Test Chamber	: 966A
Setting	:		



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dBuV	Factor dB	Actual FS dBuV/m	Limit dBuV/m	Margin dB
4960.00	Peak	41.89	3.21	45.11	74.00	-28.89
4960.00	Average	38.72	3.21	41.93	54.00	-12.07
7440.00	Peak	36.51	8.92	45.43	74.00	-28.57
7440.00	Average	27.25	8.92	36.17	54.00	-17.83

Report No.: TMWK2402000497KR

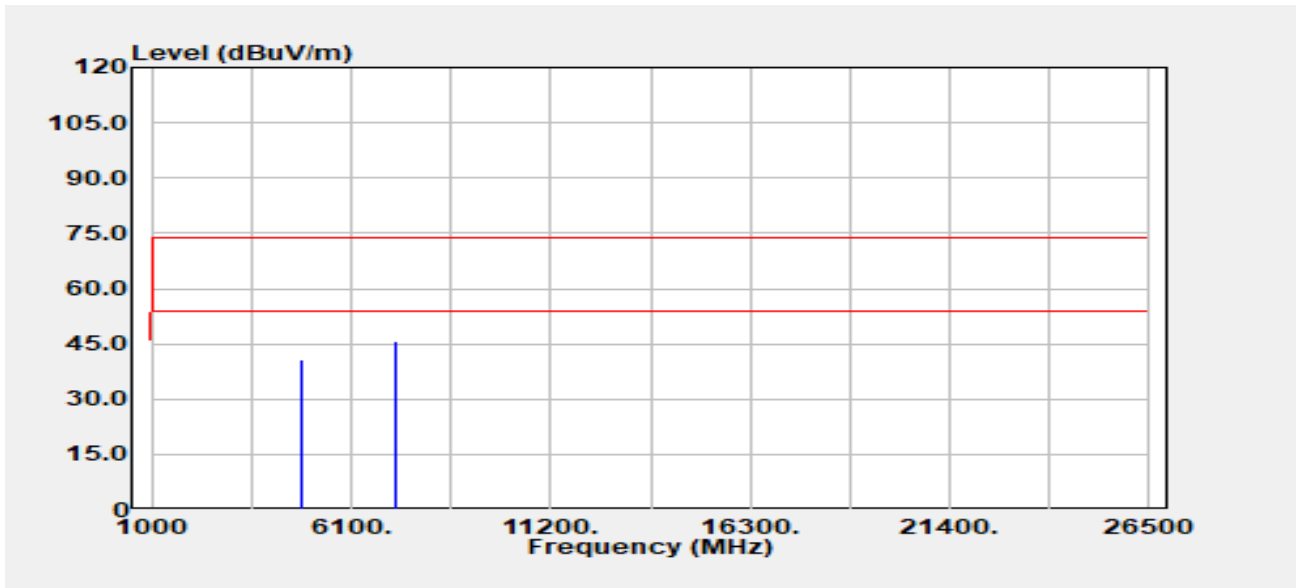
Project No	:TM-2311000354P	Test Date	:2024-02-26
Operation Band	:BT EDR	Temp./Humi.	:24.4/58
Frequency	:2402 MHz	Antenna Pol.	:Vertical
Operation Mode	:TX	Engineer	:Ray Li
EUT Pol	:H	Test Chamber	: 966A
Setting	:		



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dBuV	Factor dB	Actual FS dBuV/m	Limit dBuV/m	Margin dB
4804.00	Peak	38.48	2.23	40.70	74.00	-33.30
4804.00	Average	31.58	2.23	33.81	54.00	-20.19
7206.00	Peak	36.73	9.01	45.74	74.00	-28.26
7206.00	Average	27.91	9.01	36.92	54.00	-17.08

Report No.: TMWK2402000497KR

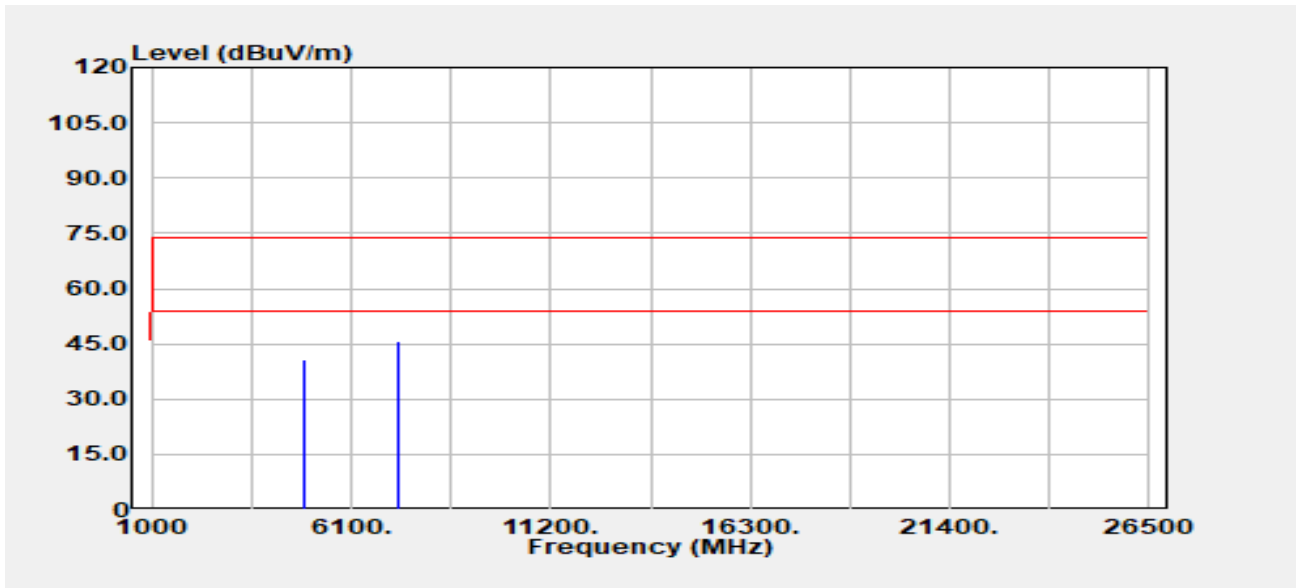
Project No	:TM-2311000354P	Test Date	:2024-02-26
Operation Band	:BT EDR	Temp./Humi.	:24.4/58
Frequency	:2402 MHz	Antenna Pol.	:Horizontal
Operation Mode	:TX	Engineer	:Ray Li
EUT Pol	:H	Test Chamber	: 966A
Setting	:		



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dBuV	Factor dB	Actual FS dBuV/m	Limit dBuV/m	Margin dB
4804.00	Peak	38.61	2.23	40.84	74.00	-33.16
4804.00	Average	31.97	2.23	34.20	54.00	-19.80
7206.00	Peak	36.63	9.01	45.64	74.00	-28.36
7206.00	Average	27.60	9.01	36.61	54.00	-17.39

Report No.: TMWK2402000497KR

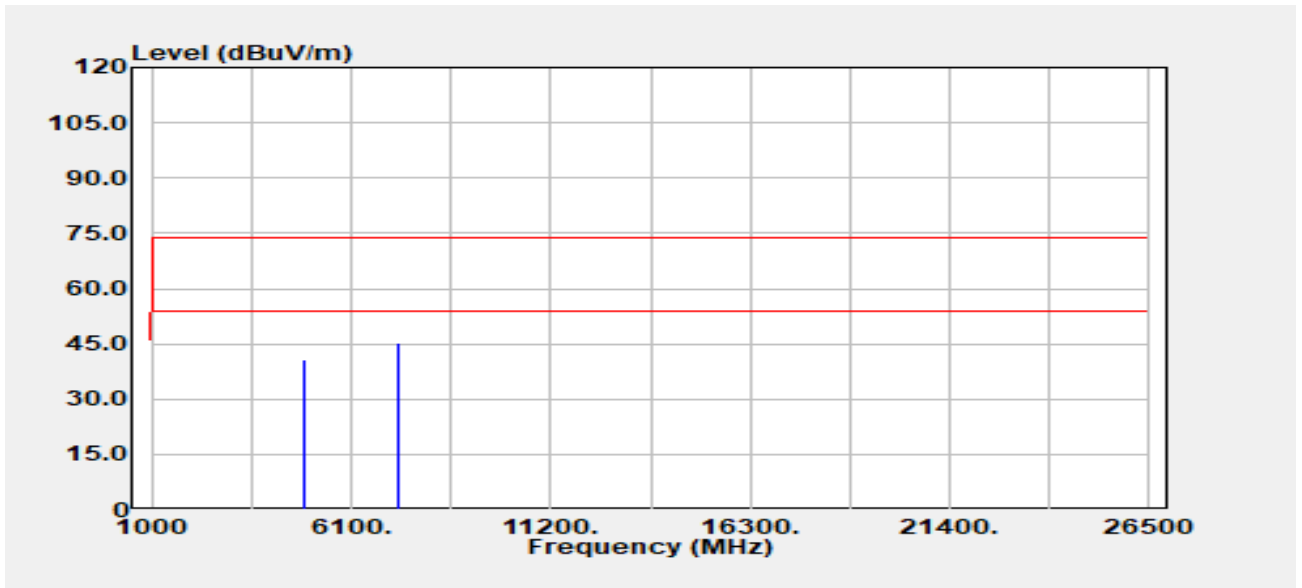
Project No	:TM-2311000354P	Test Date	:2024-02-26
Operation Band	:BT EDR	Temp./Humi.	:24.4/58
Frequency	:2441 MHz	Antenna Pol.	:Vertical
Operation Mode	:TX	Engineer	:Ray Li
EUT Pol	:H	Test Chamber	: 966A
Setting	:		



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dBuV	Factor dB	Actual FS dBuV/m	Limit dBuV/m	Margin dB
4882.00	Peak	38.22	2.56	40.78	74.00	-33.22
4882.00	Average	29.67	2.56	32.23	54.00	-21.77
7323.00	Peak	37.00	8.96	45.96	74.00	-28.04
7323.00	Average	26.83	8.96	35.79	54.00	-18.21

Report No.: TMWK2402000497KR

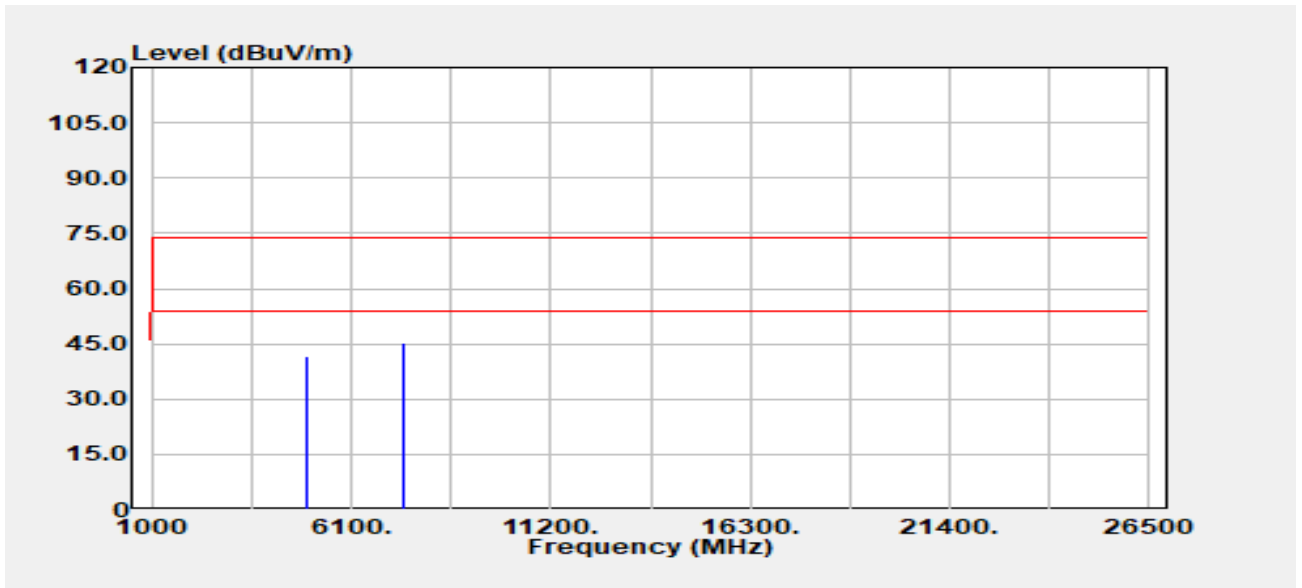
Project No	:TM-2311000354P	Test Date	:2024-02-26
Operation Band	:BT EDR	Temp./Humi.	:24.4/58
Frequency	:2441 MHz	Antenna Pol.	:Horizontal
Operation Mode	:TX	Engineer	:Ray Li
EUT Pol	:H	Test Chamber	: 966A
Setting	:		



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dBuV	Factor dB	Actual FS dBuV/m	Limit dBuV/m	Margin dB
4882.00	Peak	38.35	2.56	40.92	74.00	-33.08
4882.00	Average	32.98	2.56	35.54	54.00	-18.46
7323.00	Peak	36.37	8.96	45.33	74.00	-28.67
7323.00	Average	26.97	8.96	35.93	54.00	-18.07

Report No.: TMWK2402000497KR

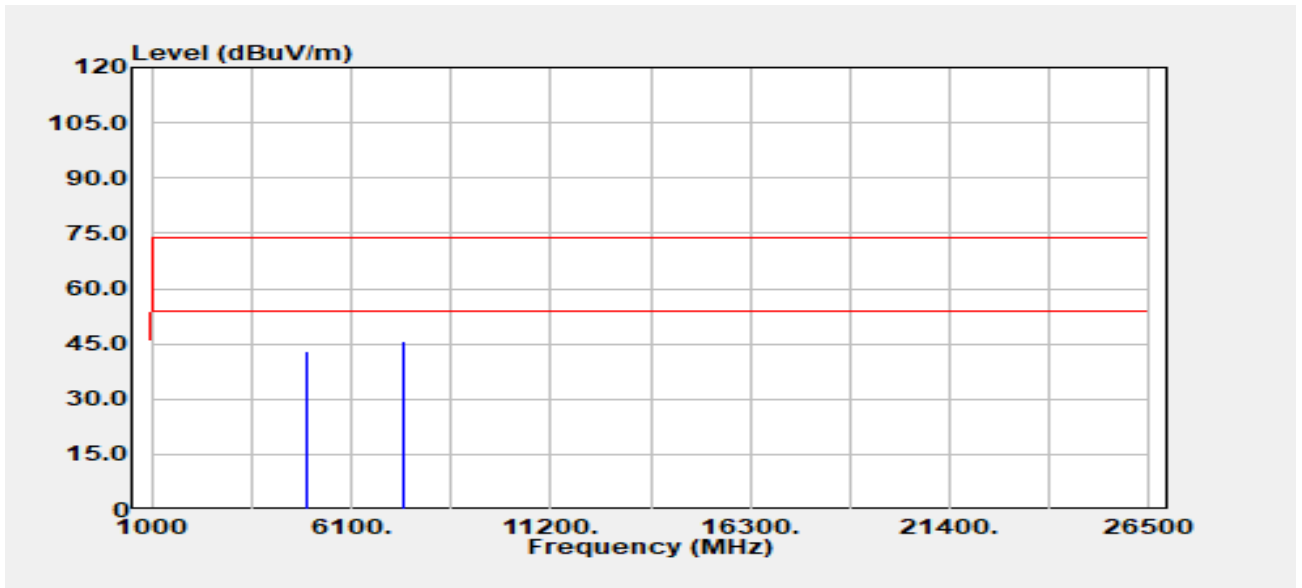
Project No	:TM-2311000354P	Test Date	:2024-02-26
Operation Band	:BT EDR	Temp./Humi.	:24.4/58
Frequency	:2480 MHz	Antenna Pol.	:Vertical
Operation Mode	:TX	Engineer	:Ray Li
EUT Pol	:H	Test Chamber	: 966A
Setting	:		



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dBuV	Factor dB	Actual FS dBuV/m	Limit dBuV/m	Margin dB
4960.00	Peak	38.63	3.21	41.84	74.00	-32.16
4960.00	Average	32.24	3.21	35.45	54.00	-18.55
7440.00	Peak	36.32	8.92	45.24	74.00	-28.76
7440.00	Average	26.64	8.92	35.56	54.00	-18.44

Report No.: TMWK2402000497KR

Project No	:TM-2311000354P	Test Date	:2024-02-26
Operation Band	:BT EDR	Temp./Humi.	:24.4/58
Frequency	:2480 MHz	Antenna Pol.	:Horizontal
Operation Mode	:TX	Engineer	:Ray Li
EUT Pol	:H	Test Chamber	: 966A
Setting	:		

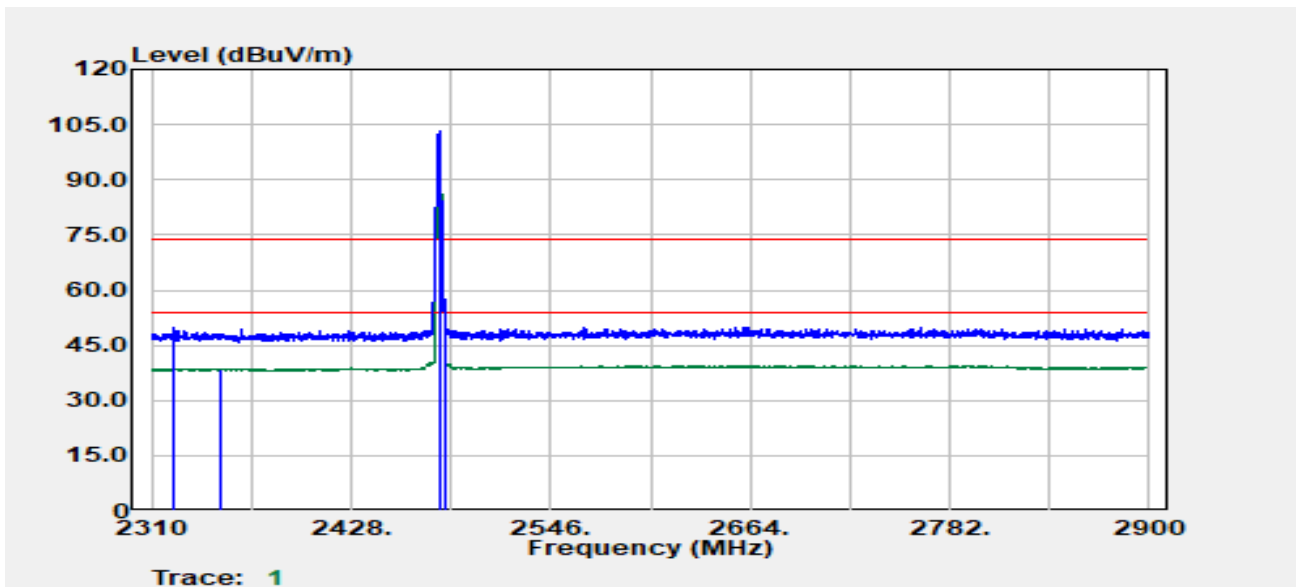


Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dB μ V	Factor dB	Actual FS dB μ V/m	Limit dB μ V/m	Margin dB
4960.00	Peak	39.85	3.21	43.06	74.00	-30.94
4960.00	Average	34.86	3.21	38.07	54.00	-15.93
7440.00	Peak	36.97	8.92	45.89	74.00	-28.11
7440.00	Average	26.72	8.92	35.64	54.00	-18.36

Report No.: TMWK2402000497KR

Co-location

Project No	:TM-2311000354P	Test Date	:2024-04-10
Operation Band	:NFC_BT EDR_LTE Band2 QPSK1,0_20M	Temp./Humi.	:24.3/60
Frequency	:2480 MHz_1871 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:Bandedge	Engineer	:Ray Li
EUT Pol	:H	Test Chamber	: 966A
Setting	:		

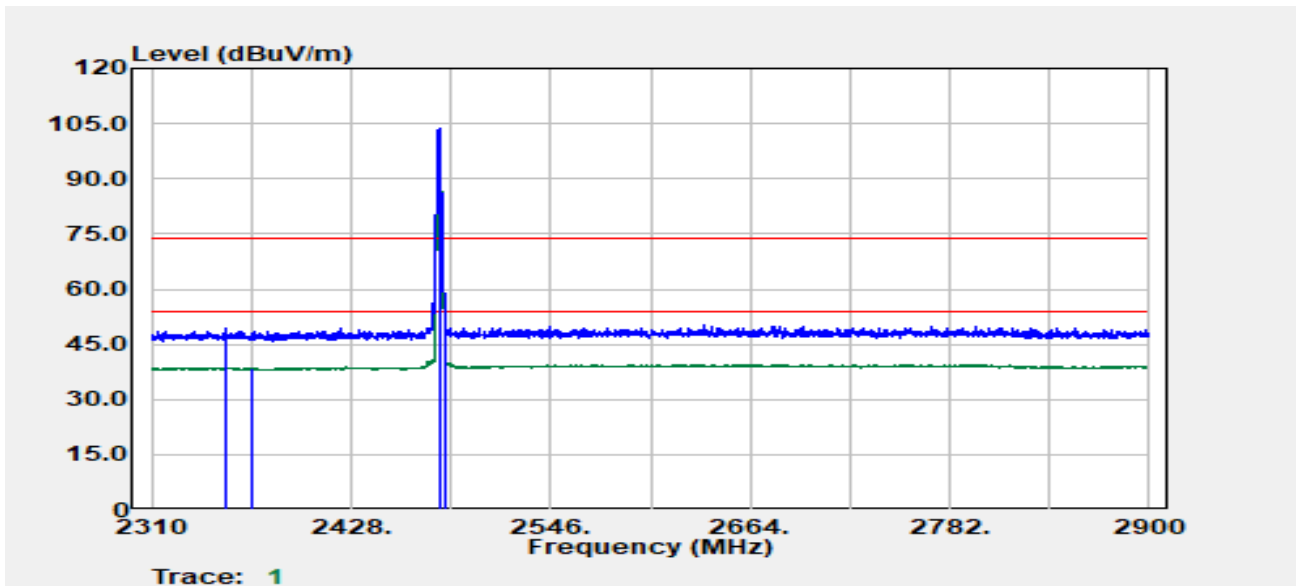


Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dB μ V	Factor dB	Actual FS dB μ V/m	Limit dB μ V/m	Margin dB
2323.51	Peak	44.22	5.40	49.62	74.00	-24.38
2350.52	Average	33.21	5.47	38.68	54.00	-15.32
2480.00	Peak	97.31	5.89	103.20	--	--
2480.00	Average	96.68	5.89	102.57	--	--
2483.57	Peak	47.80	5.94	53.74	74.00	-20.26
2483.57	Average	37.44	5.94	43.38	54.00	-10.62

Note: The highest signals which over limit are WWAN co-location fundamental and harmonic signals. But it meets the signal's proprietary standards.

Report No.: TMWK2402000497KR

Project No	:TM-2311000354P	Test Date	:2024-04-10
Operation Band	:NFC_BT EDR_LTE Band2 QPSK1,0_20M	Temp./Humi.	:24.3/60
Frequency	:2480 MHz_1871 MHz	Antenna Pol.	:HORIZONTAL
Operation Mode	:Bandedge	Engineer	:Ray Li
EUT Pol	:H	Test Chamber	: 966A
Setting	:		

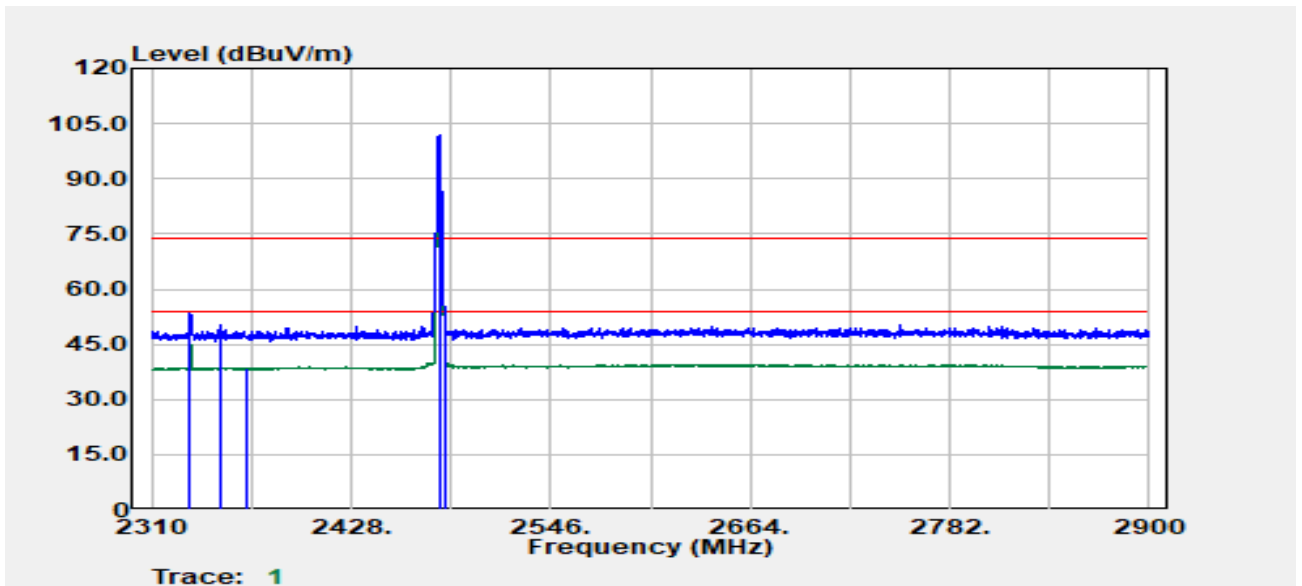


Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dB μ V	Factor dB	Actual FS dB μ V/m	Limit dB μ V/m	Margin dB
2354.27	Peak	43.77	5.47	49.24	74.00	-24.76
2370.03	Average	33.21	5.39	38.60	54.00	-15.40
2480.00	Peak	97.80	5.89	103.69	--	--
2480.00	Average	97.05	5.89	102.94	--	--
2483.57	Peak	47.04	5.94	52.98	74.00	-21.02
2483.57	Average	37.63	5.94	43.57	54.00	-10.43

Note: The highest signals which over limit are WWAN co-location fundamental and harmonic signals. But it meets the signal's proprietary standards.

Report No.: TMWK2402000497KR

Project No	:TM-2311000354P	Test Date	:2024-04-10
Operation Band	:NFC_BR EDR_LTE Band13 QPSK1,0_10M	Temp./Humi.	:24.3/60
Frequency	:2480 MHz_777.6 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:Bandedge	Engineer	:Ray Li
EUT Pol	:H	Test Chamber	: 966A
Setting	:		

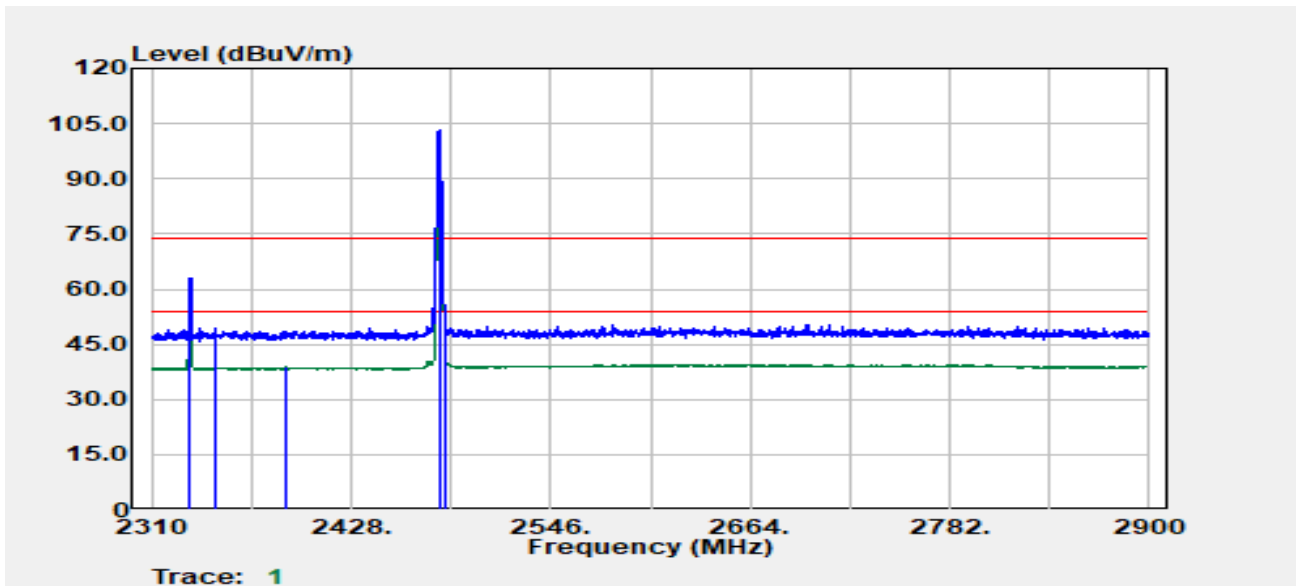


Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dB μ V	Factor dB	Actual FS dB μ V/m	Limit dB μ V/m	Margin dB
2332.80	Peak	47.90	5.40	53.30	82.20	-28.90
2350.02	Peak	44.64	5.47	50.11	74.00	-23.89
2366.27	Average	33.13	5.42	38.55	54.00	-15.45
2480.00	Peak	95.96	5.89	101.86	--	--
2480.00	Average	95.22	5.89	101.11	--	--
2483.57	Peak	47.14	5.94	53.08	74.00	-20.92
2483.57	Average	36.56	5.94	42.50	54.00	-11.50

Note: The highest signals which over limit are WWAN co-location fundamental and harmonic signals. But it meets the signal's proprietary standards.

Report No.: TMWK2402000497KR

Project No	:TM-2311000354P	Test Date	:2024-04-10
Operation Band	:NFC_BR EDR_LTE Band13 QPSK1,0_10M	Temp./Humi.	:24.3/60
Frequency	:2480 MHz_777.6 MHz	Antenna Pol.	:HORIZONTAL
Operation Mode	:Bandedge	Engineer	:Ray Li
EUT Pol	:H	Test Chamber	: 966A
Setting	:		

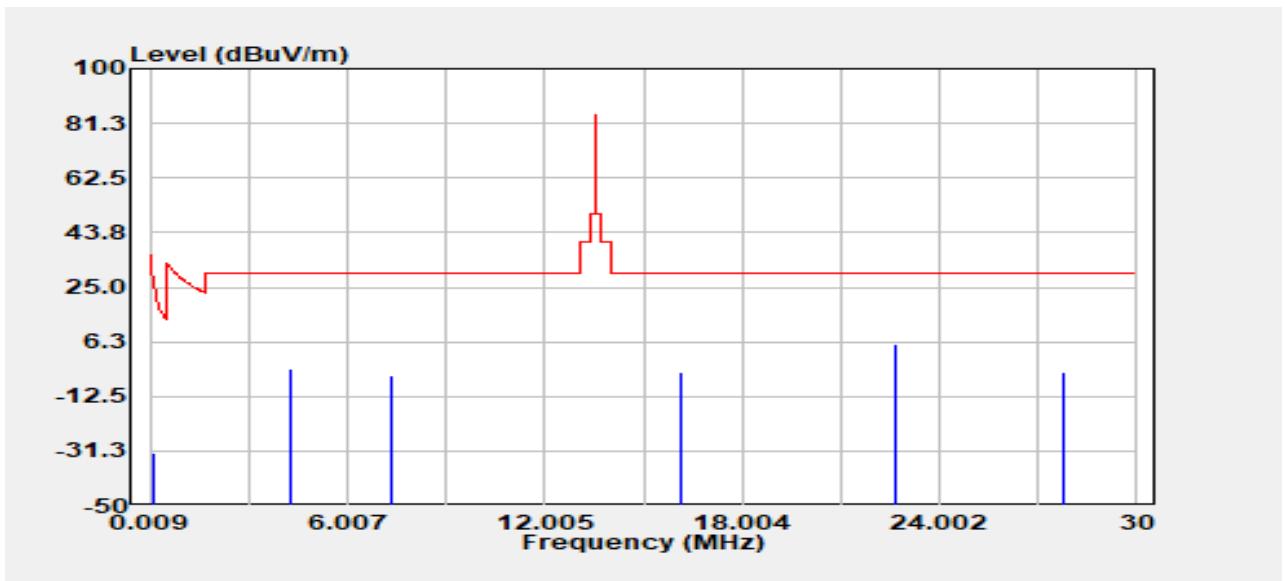


Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dB μ V	Factor dB	Actual FS dB μ V/m	Limit dB μ V/m	Margin dB
2332.80	Peak	57.60	5.39	63.00	82.20	-19.20
2347.27	Peak	44.12	5.44	49.56	74.00	-24.44
2390.00	Average	33.26	5.51	38.77	54.00	-15.23
2480.00	Peak	97.32	5.89	103.21	--	--
2480.00	Average	96.56	5.89	102.45	--	--
2483.57	Average	37.24	5.94	43.18	54.00	-10.82
2484.07	Peak	46.13	5.95	52.08	74.00	-21.92

Note: The highest signals which over limit are WWAN co-location fundamental and harmonic signals. But it meets the signal's proprietary standards.

Report No.: TMWK2402000497KR

Project No	:TM-2311000354P	Test Date	:2024-04-10
Operation Band	:NFC_BT EDR_LTE Band2 QPSK1,0 20M	Temp./Humi.	:24.4/59
Frequency	:13.56 MHz_2480 MHz_1871 MHz	Antenna Pol.	:Horizontal
Operation Mode	:TX	Engineer	:Tony Chao
EUT Pol	:H	Test Chamber	: 966A
Setting	:		

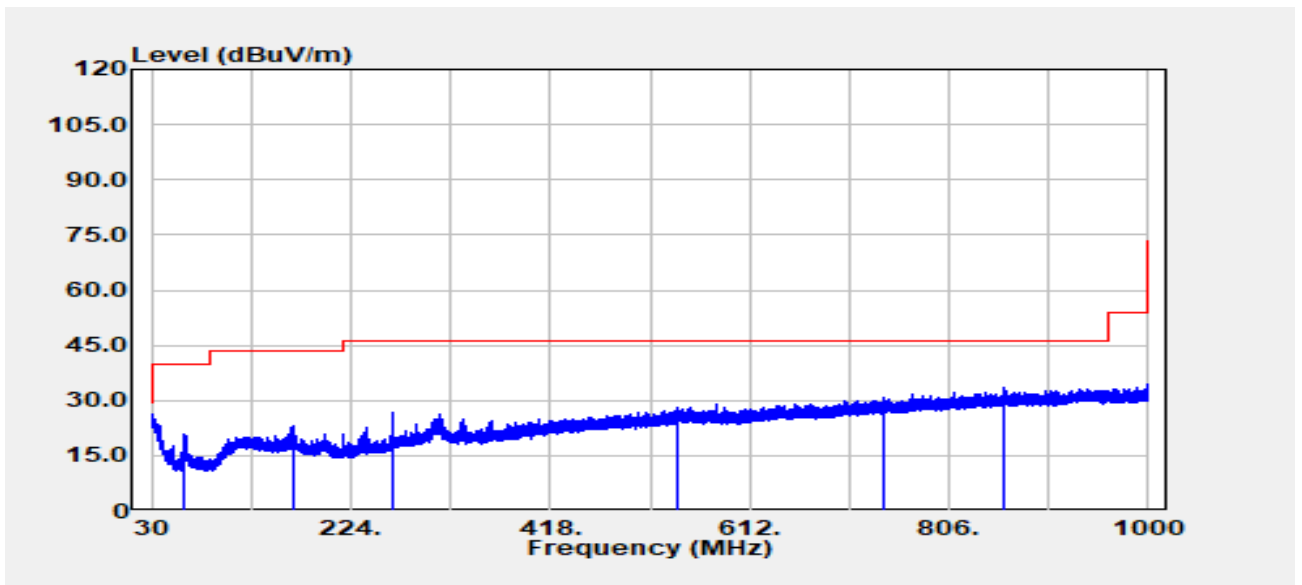


Freq. MHz	Detector Mode	Spectrum Read Level @3m dB μ V	Factor @3m dB	Actual FS @3m dB μ V/m	Factor @30m&300m dB	Actual FS @30m&300m dB μ V/m	Limit dB μ V/m	Margin dB
0.11	Peak	34.54	13.67	48.21	-80.00	-31.79	26.61	-58.40
4.28	Peak	21.56	15.68	37.23	-40.00	-2.77	29.54	-32.31
7.33	Peak	18.26	16.27	34.53	-40.00	-5.47	29.54	-35.01
16.11	Peak	19.14	16.92	36.06	-40.00	-3.94	29.54	-33.48
22.69	Peak	28.94	16.33	45.26	-40.00	5.26	29.54	-24.28
27.79	Peak	18.68	17.15	35.83	-40.00	-4.17	29.54	-33.71

Note: The highest signals which over limit are WWAN co-location fundamental and harmonic signals. But it meets the signal's proprietary standards.

Report No.: TMWK2402000497KR

Project No	:TM-2311000354P	Test Date	:2024-04-10
Operation Band	:NFC_BT EDR_LTE Band2 QPSK1,0 20M	Temp./Humi.	:24.4/59
Frequency	:13.56 MHz_2480 MHz_1871 MHz	Antenna Pol.	:HORIZONTAL
Operation Mode	:TX	Engineer	:Tony Chao
EUT Pol	:H	Test Chamber	: 966A
Setting	:		

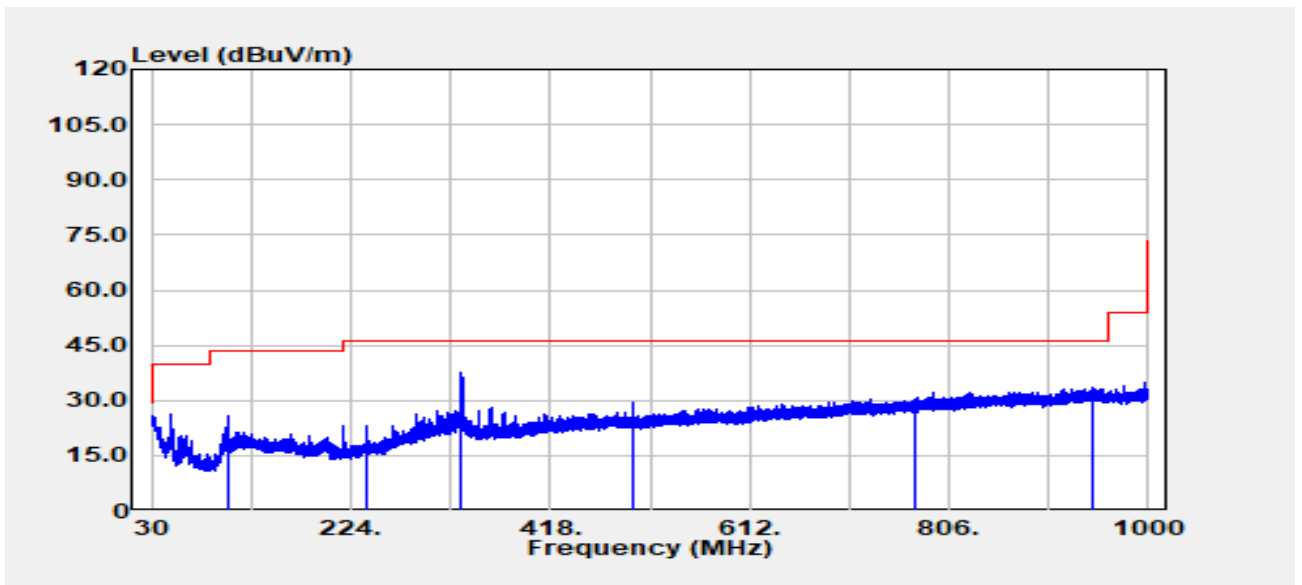


Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dB μ V	Factor dB	Actual FS dB μ V/m	Limit dB μ V/m	Margin dB
62.36	Peak	36.33	-15.72	20.61	40.00	-19.39
167.96	Peak	34.22	-10.99	23.24	43.50	-20.26
264.03	Peak	36.40	-9.68	26.72	46.00	-19.28
542.51	Peak	30.85	-2.96	27.89	46.00	-18.11
742.95	Peak	30.25	0.41	30.65	46.00	-15.35
859.17	Peak	31.20	2.20	33.40	46.00	-12.60

Note: The highest signals which over limit are WWAN co-location fundamental and harmonic signals. But it meets the signal's proprietary standards.

Report No.: TMWK2402000497KR

Project No	:TM-2311000354P	Test Date	:2024-04-10
Operation Band	:NFC_BLE 2M_LTE Band2 QPSK1,0 20M	Temp./Humi.	:24.4/59
Frequency	:13.56 MHz_2480 MHz_1871 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:TX	Engineer	:Tony Chao
EUT Pol	:H	Test Chamber	: 966A
Setting	:		

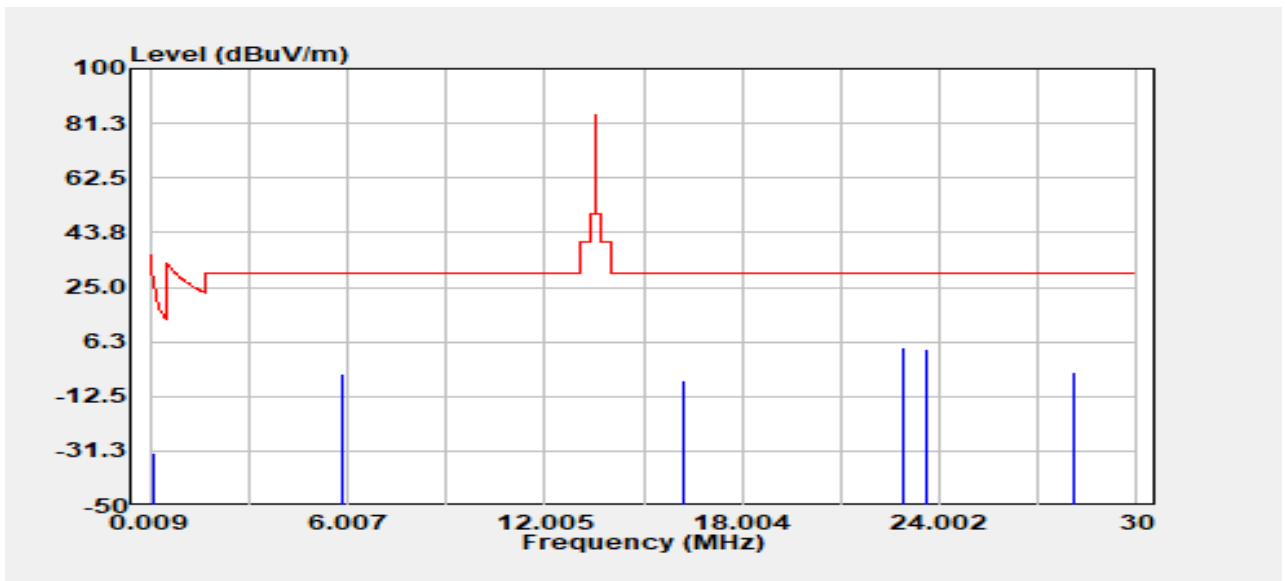


Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dBμV	Factor dB	Actual FS dBμV/m	Limit dBμV/m	Margin dB
104.87	Peak	37.11	-11.32	25.78	43.50	-17.72
240.01	Peak	34.05	-10.85	23.20	46.00	-22.80
331.93	Peak	45.35	-7.91	37.44	46.00	-8.56
499.61	Peak	33.19	-3.58	29.61	46.00	-16.39
772.54	Peak	29.26	0.93	30.18	46.00	-15.82
945.42	Peak	30.00	3.71	33.71	46.00	-12.29

Note: The highest signals which over limit are WWAN co-location fundamental and harmonic signals. But it meets the signal's proprietary standards.

Report No.: TMWK2402000497KR

Project No	:TM-2311000354P	Test Date	:2024-04-10
Operation Band	:NFC_BT EDR_LTE Band13 QPSK1,0 10M	Temp./Humi.	:24.4/59
Frequency	:13.56 MHz_2480 MHz_777.6 MHz	Antenna Pol.	:Horizontal
Operation Mode	:TX	Engineer	:Tony Chao
EUT Pol	:H	Test Chamber	: 966A
Setting	:		

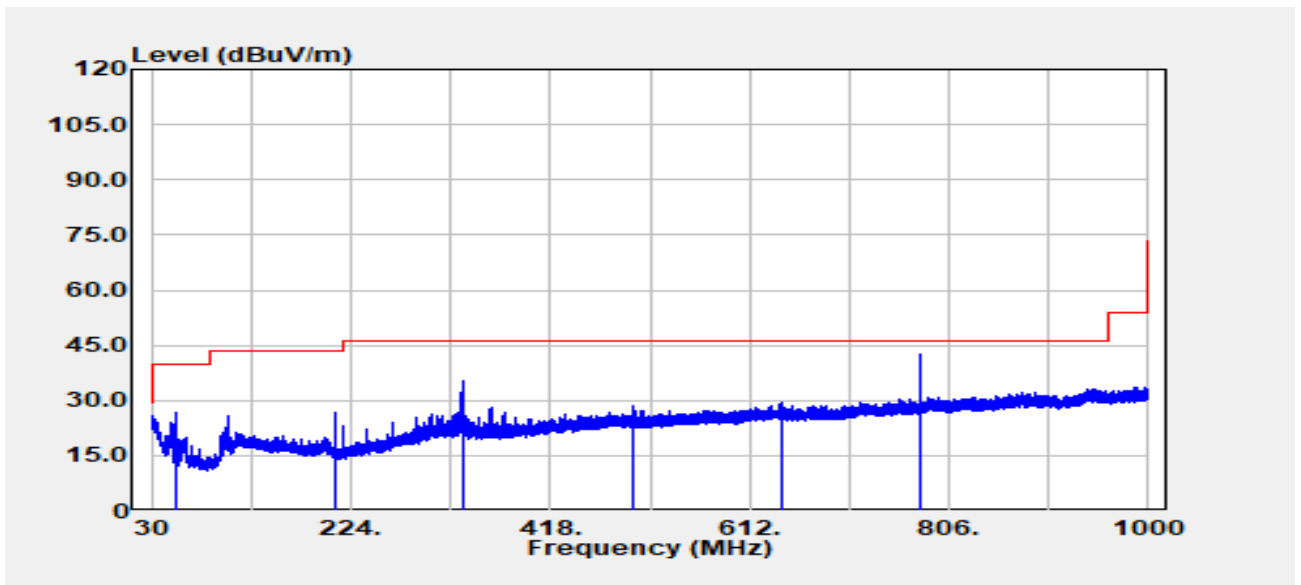


Freq. MHz	Detector Mode	Spectrum Read Level @3m dBμV	Factor @3m dB	Actual FS @3m dBμV/m	Factor @30m&300m dB	Actual FS @30m&300m dBμV/m	Limit dBμV/m	Margin dB
0.11	Peak	34.54	13.67	48.21	-80.00	-31.79	26.61	-58.40
5.88	Peak	18.73	16.58	35.32	-40.00	-4.68	29.54	-34.22
16.25	Peak	16.11	16.98	33.09	-40.00	-6.91	29.54	-36.45
22.92	Peak	28.24	16.21	44.46	-40.00	4.46	29.54	-25.08
23.58	Peak	27.25	16.30	43.55	-40.00	3.55	29.54	-25.99
28.07	Peak	18.64	17.13	35.77	-40.00	-4.23	29.54	-33.77

Note: The highest signals which over limit are WWAN co-location fundamental and harmonic signals. But it meets the signal's proprietary standards.

Report No.: TMWK2402000497KR

Project No	:TM-2311000354P	Test Date	:2024-04-10
Operation Band	:NFC_BT EDR_LTE Band13 QPSK1,0 10M	Temp./Humi.	:24.4/59
Frequency	:13.56 MHz_2480 MHz_777.6 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:TX	Engineer	:Tony Chao
EUT Pol	:H	Test Chamber	: 966A
Setting	:		

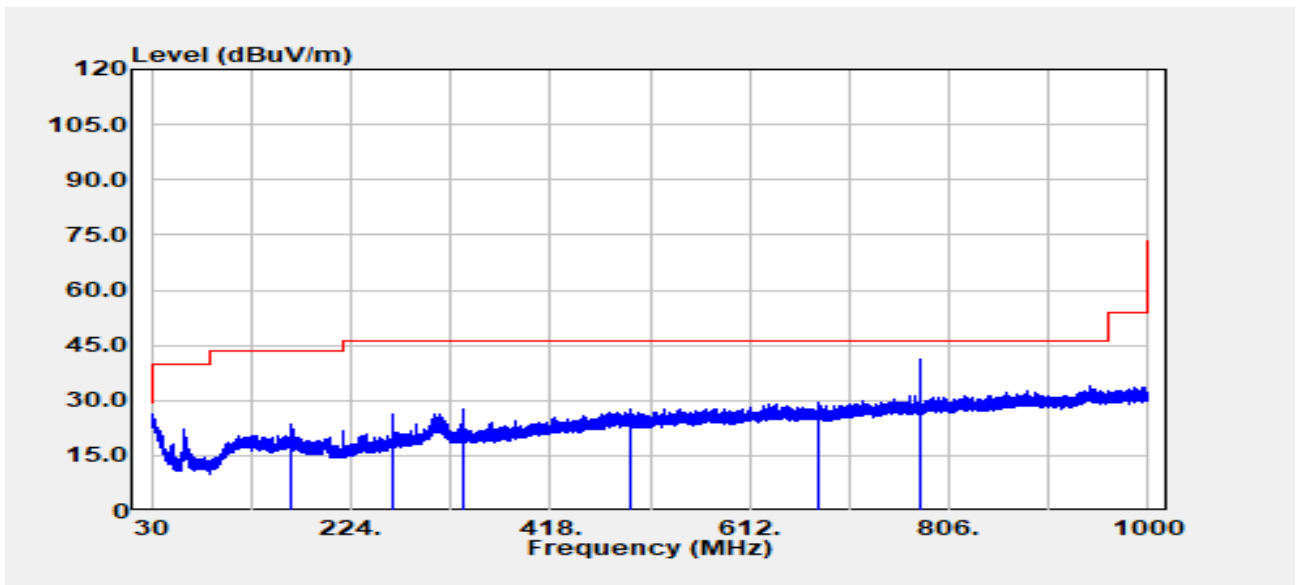


Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dBμV	Factor dB	Actual FS dBμV/m	Limit dBμV/m	Margin dB
54.74	Peak	42.98	-16.09	26.89	40.00	-13.11
209.71	Peak	38.91	-12.29	26.62	43.50	-16.88
332.90	Peak	43.17	-7.90	35.27	46.00	-10.73
499.04	Peak	31.91	-3.58	28.33	46.00	-17.67
643.17	Peak	30.15	-0.87	29.28	46.00	-16.72
777.61	Peak	41.30	1.13	42.42	46.00	-3.58

Note: The highest signals which over limit are WWAN co-location fundamental and harmonic signals. But it meets the signal's proprietary standards.

Report No.: TMWK2402000497KR

Project No	:TM-2311000354P	Test Date	:2024-04-10
Operation Band	:NFC_BT EDR_LTE Band13 QPSK1,0 10M	Temp./Humi.	:24.4/59
Frequency	:13.56 MHz_2480 MHz_777.6 MHz	Antenna Pol.	:HORIZONTAL
Operation Mode	:TX	Engineer	:Tony Chao
EUT Pol	:H	Test Chamber	: 966A
Setting	:		

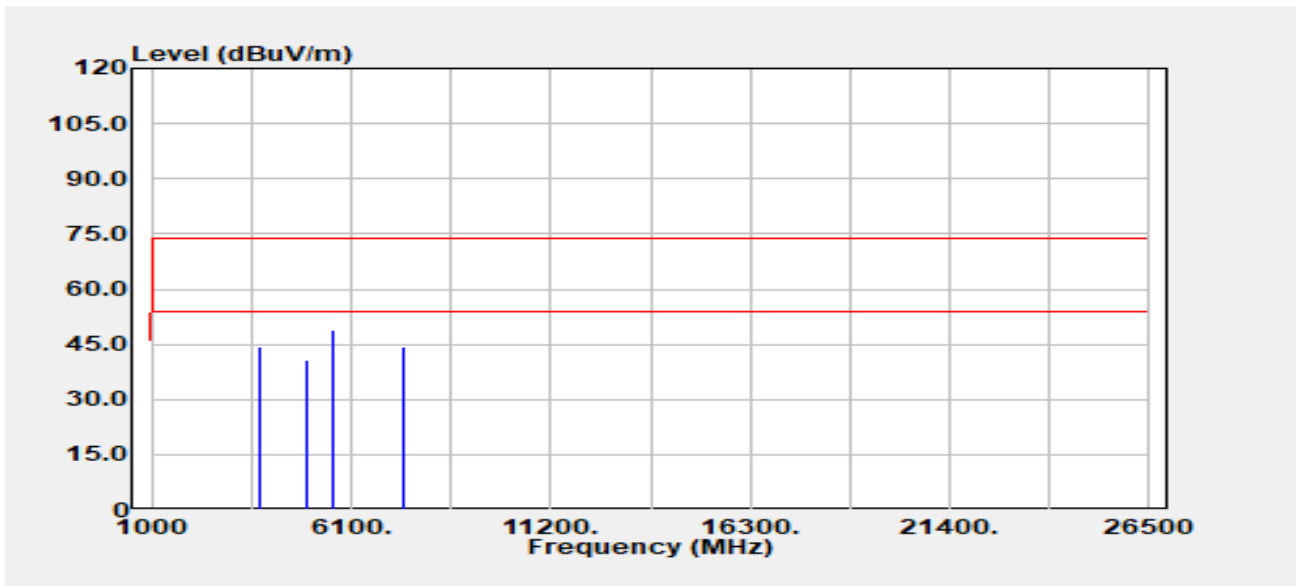


Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dB μ V	Factor dB	Actual FS dB μ V/m	Limit dB μ V/m	Margin dB
165.89	Peak	34.55	-10.90	23.66	43.50	-19.84
263.99	Peak	35.87	-9.69	26.18	46.00	-19.82
332.11	Peak	35.33	-7.91	27.42	46.00	-18.58
495.64	Peak	31.15	-3.63	27.52	46.00	-18.48
678.75	Peak	29.94	-0.70	29.23	46.00	-16.77
777.56	Peak	40.15	1.12	41.27	46.00	-4.73

Note: The highest signals which over limit are WWAN co-location fundamental and harmonic signals. But it meets the signal's proprietary standards.

Report No.: TMWK2402000497KR

Project No	:TM-2311000354P	Test Date	:2024-04-10
Operation Band	:NFC_BT EDR_LTE Band2	Temp./Humi.	:24.3/60
	QPSK1,0_20M		
Frequency	:2480 MHz_1871 MHz	Antenna Pol.	:Vertical
Operation Mode	:TX	Engineer	:Ray Li
EUT Pol	:H	Test Chamber	: 966A
Setting	:		

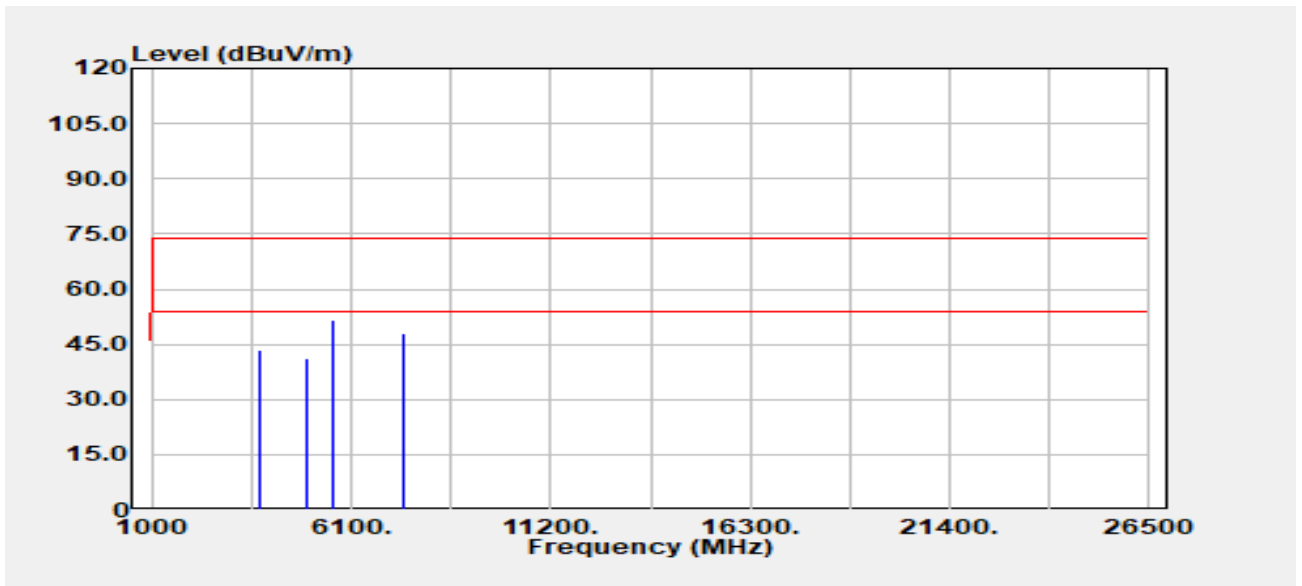


Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dB μ V	Factor dB	Actual FS dB μ V/m	Limit dB μ V/m	Margin dB
3742.00	Peak	44.20	0.23	44.42	82.20	-37.78
4960.00	Peak	37.62	3.21	40.83	74.00	-33.17
4960.00	Average	28.19	3.21	31.40	54.00	-22.60
5613.00	Peak	43.93	4.91	48.84	82.20	-33.36
7440.00	Peak	35.63	8.92	44.55	74.00	-29.45
7440.00	Average	31.21	8.92	40.13	54.00	-13.87

Note: The highest signals which over limit are WWAN co-location fundamental and harmonic signals. But it meets the signal's proprietary standards.

Report No.: TMWK2402000497KR

Project No	:TM-2311000354P	Test Date	:2024-04-10
Operation Band	:NFC_BT EDR_LTE Band2 QPSK1,0_20M	Temp./Humi.	:24.3/60
Frequency	:2480 MHz_1871 MHz	Antenna Pol.	:Horizontal
Operation Mode	:TX	Engineer	:Ray Li
EUT Pol	:H	Test Chamber	: 966A
Setting	:		

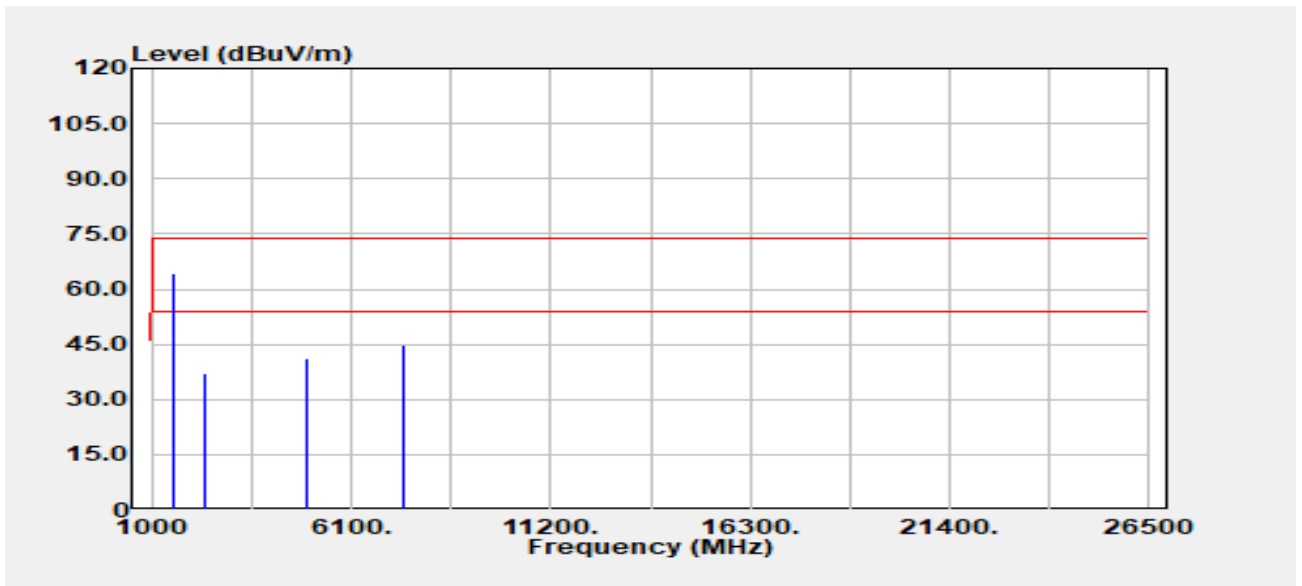


Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dB μ V	Factor dB	Actual FS dB μ V/m	Limit dB μ V/m	Margin dB
3742.00	Peak	43.30	0.23	43.52	82.20	-38.68
4960.00	Peak	38.19	3.21	41.41	74.00	-32.59
4960.00	Average	27.55	3.21	30.76	54.00	-23.24
5613.00	Peak	46.71	4.91	51.61	82.20	-30.59
7440.00	Peak	38.86	8.92	47.78	74.00	-26.22
7440.00	Average	34.32	8.92	43.24	54.00	-10.76

Note: The highest signals which over limit are WWAN co-location fundamental and harmonic signals. But it meets the signal's proprietary standards.

Report No.: TMWK2402000497KR

Project No	:TM-2311000354P	Test Date	:2024-04-10
Operation Band	:NFC_BT EDR_LTE Band13 QPSK1,0_10M	Temp./Humi.	:24.3/60
Frequency	:2480 MHz_777.6 MHz	Antenna Pol.	:Vertical
Operation Mode	:TX	Engineer	:Ray Li
EUT Pol	:H	Test Chamber	: 966A
Setting	:		

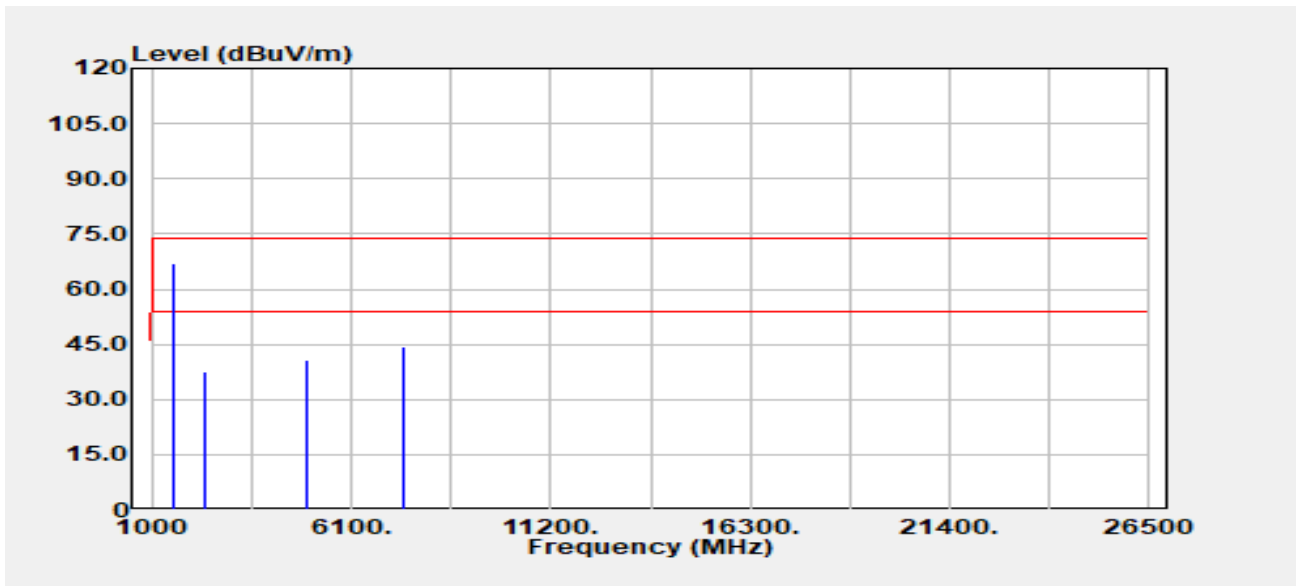


Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dB μ V	Factor dB	Actual FS dB μ V/m	Limit dB μ V/m	Margin dB
1555.20	Peak	71.44	-7.24	64.20	82.20	-18.00
2332.80	Peak	40.68	-3.61	37.08	82.20	-45.12
4960.00	Peak	38.13	3.21	41.34	74.00	-32.66
4960.00	Average	31.10	3.21	34.31	54.00	-19.69
7440.00	Peak	35.87	8.92	44.79	74.00	-29.21
7440.00	Average	26.19	8.92	35.11	54.00	-18.89

Note: The highest signals which over limit are WWAN co-location fundamental and harmonic signals. But it meets the signal's proprietary standards.

Report No.: TMWK2402000497KR

Project No	:TM-2311000354P	Test Date	:2024-04-10
Operation Band	:NFC_BT EDR_LTE Band13 QPSK1,0_10M	Temp./Humi.	:24.3/60
Frequency	:2480 MHz_777.6 MHz	Antenna Pol.	:Horizontal
Operation Mode	:TX	Engineer	:Ray Li
EUT Pol	:H	Test Chamber	: 966A
Setting	:		



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dBUV	Factor dB	Actual FS dBUV/m	Limit dBUV/m	Margin dB
1555.20	Peak	74.38	-7.24	67.13	82.20	-15.07
2332.80	Peak	41.06	-3.61	37.46	82.20	-44.74
4960.00	Peak	37.35	3.21	40.57	74.00	-33.43
4960.00	Average	31.01	3.21	34.22	54.00	-19.78
7440.00	Peak	35.34	8.92	44.26	74.00	-29.74
7440.00	Average	26.22	8.92	35.14	54.00	-18.86

Note: The highest signals which over limit are WWAN co-location fundamental and harmonic signals. But it meets the signal's proprietary standards.

- End of Test Report -