

Project No: TM-2405000413P
Report No.: TMWK2406002103KR

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

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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

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。

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Revision History

Rev.	Issue Date	Revisions	Effect Page	Revised By
00	September 16, 2024	Initial Issue	ALL	Peggy Tsai



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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	N727
HMN	PRO X
Received Date	May 29, 2024
Date of Test	June 20 ~ July 10, 2024
Power Supply	1. Power from Adapter. LUCENT TRANS / 1A52-PD20W I/P: 100-240Vac, 800mA, 50-60Hz O/P: 5Vdc, 3A or 9Vdc, 2.22A 2. Power from Adapter. TTT / MSS050200BI I/P: 100-240Vac, 0.3A, 50-60Hz O/P: 5.0Vdc, 2A(10.0W) 3. Power from Car Charger. TTT/ TCV10100 I/P: DC 12-24V O/P: DC 5V, 2A (MAX) 4. Power from Cradle. Webfleet solutions / N653 Video Cradle I/P (1): DC 12V, 1A or DC 24V, 0.5A (Fleet Port) I/P (2): DC 5V, 2A (USB-C) 5. Power from Battery. Apower Electronics Co., Ltd. / AEC565786B Rating: 3.8Vdc, 4000mAh, 15.2Wh 6. Power from Host System.(DC 5V)



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PMN	SC680A-NA
EUT Serial #	HO145U00012
Class II Permissive Change	The product has been granted by FCC dated 03/25/2024 under FCC ID: P4Q-SC680A. The intention of this application is to enable the modular certified FCC ID:P4Q-SC680A to be integrated in MiTAC Tablet N727. 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 product has been granted by IC dated 03/26/2024 under IC : 2420C-SC680A. The intention of this application is to enable the modular certified IC: 2420C-SC680A to be integrated in MiTAC Tablet N727. 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.

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1.2 EUT CHANNEL INFORMATION

Frequency Range	802.11b/g/n HT 20: 2412 MHz ~ 2462 MHz 802.11n HT40: 2422 MHz ~ 2452 MHz
Modulation Type	1. IEEE 802.11b mode: CCK 2. IEEE 802.11g mode: OFDM 3. IEEE 802.11n HT 20 MHz mode : OFDM 4. IEEE 802.11n HT 40 MHz mode : OFDM
Number of channel	1. IEEE 802.11b mode: 11 Channels 2. IEEE 802.11g mode: 11 Channels 3. IEEE 802.11n HT 20 MHz mode : 11 Channels 4. IEEE 802.11n HT 40 MHz mode : 7 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
☐ 1 MHz or less	1	Middle
☐ 1 MHz to 10 MHz	2	1 near top and 1 near bottom
☒ More than 10 MHz	3	1 near top, 1 near middle, and 1 near bottom

1.3 ANTENNA INFORMATION

Antenna Specification	☒ PIFA ☐ PCB ☐ Dipole ☐ Coils
Antenna Gain	Gain: 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.

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1.4 MEASUREMENT UNCERTAINTY

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

1.5 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



1.6 INSTRUMENT CALIBRATION

Conducted FCC/NCC/IC(All)					
Name of Equipment	Manufacturer	Model	Serial Number	Calibration Date	Calibration Due
Power Sensor	Anritsu	MA2411B	1911387	2023-07-25	2024-07-24
Power Meter	Anritsu	ML2496A	2136002	2023-11-16	2024-11-15
Cable	Woken	SUMITOMO	1	2024-03-02	2025-03-01
Signal Analyzer	KEYSIGHT	N9030B	MY62291089	2023-10-13	2024-10-12
Attenuator	Marvelous Microwave Inc	MVE2213-10	08	2023-11-07	2024-11-06
Software	Radio Test Software Ver. 21				

AC Mains Conduction					
Name of Equipment	Manufacturer	Model	Serial Number	Calibration Date	Calibration Due
EMI Test Receiver	R&S	ESCI	100064	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:**
- 1. Each piece of equipment is scheduled for calibration once a year.
 - 2. N.C.R. = No Calibration Required.



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966A_Radiated Wi-Fi 2.4GHz					
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	SCHWARZBECK	FMZB 1513-60	1513-60-028	2023-12-13	2024-12-12
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
Attenuator	Mini-Circuits	BW-S9W5	BWS9W5-09-966A-01	2024-02-07	2025-02-06
High Pass Filters	Titan Microwave	T04H30001800070S01	22011402-4	2024-06-12	2025-06-13
Horn Antenna	SCHWARZBECK	BBHA9170	1047	2023-12-13	2024-12-12
Pre-Amplifier	EMCI	EMC184045SE	980860	2023-12-12	2024-12-11
Radio Communication Analyzer	Anritsu	MT-8820C	6201240043	2023-12-24	2024-12-23
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
Site Validation	CCS	966A	N/A	2023-07-10	2024-07-09
Software	e3 V9-210616c				

Remark:

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



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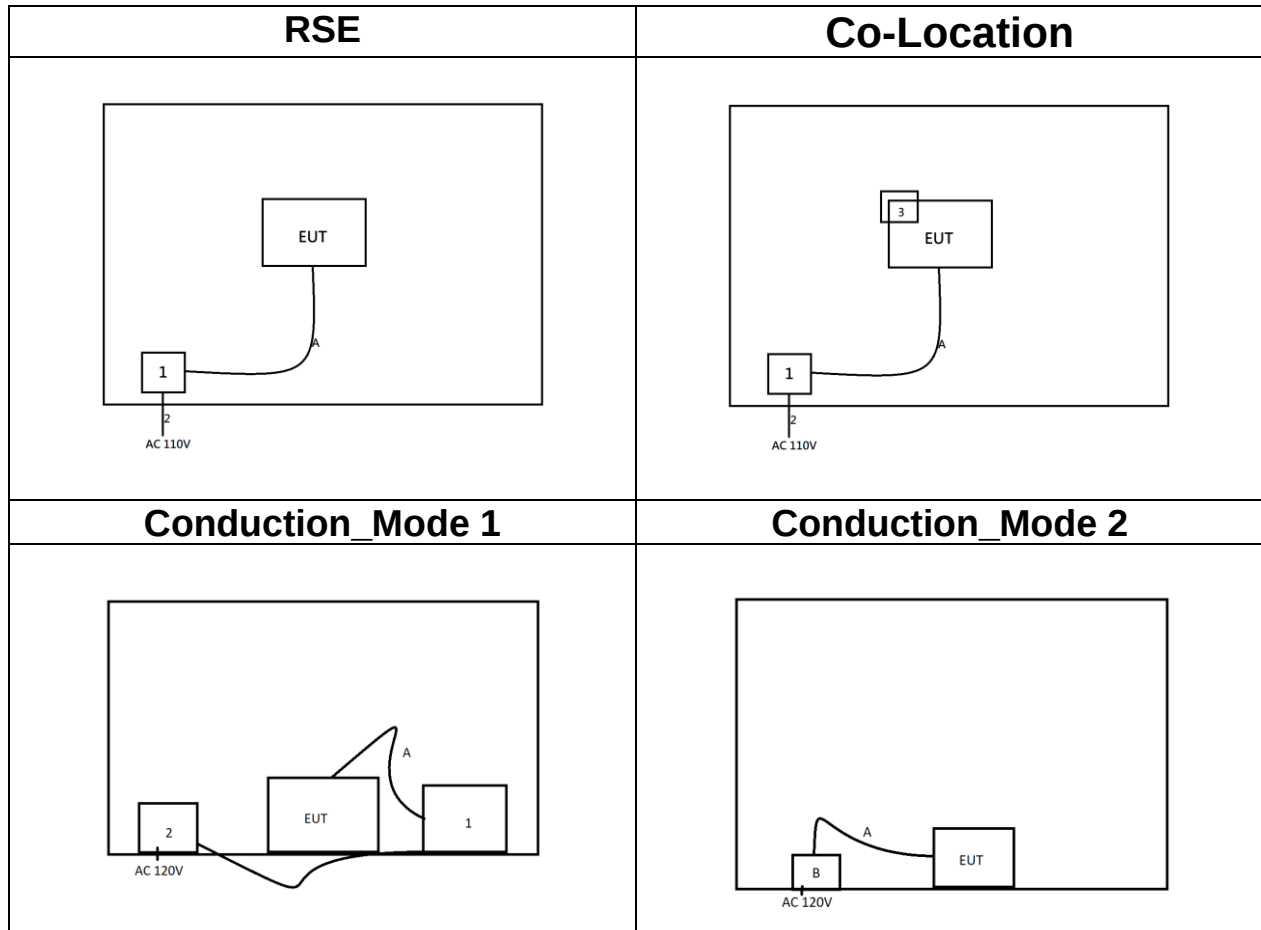
1.7 SUPPORT AND EUT ACCESSORIES EQUIPMENT

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

Support Equipment (Conduction)						
No.	Equipment	Brand	Model	Series No.	FCC ID	IC
1	NB(D)	Lenovo	ThinkPad X260	N/A	N/A	N/A
2	Adapter	Lenovo	ADLX45DLC3A	N/A	N/A	N/A
A	Type-C Cable	N/A	N/A	N/A	N/A	N/A
B	Adapter	TTT	MSS050200BI	N/A	N/A	N/A

Support Equipment (RSE 、Co-Location)						
No.	Equipment	Brand	Model	Series No.	FCC ID	IC
1	NB(D)	Lenovo	ThinkPad X260	N/A	N/A	N/A
2	Adapter	Lenovo	ADLX45DLC3A	N/A	N/A	N/A
3	Proximity card	Easycard	N/A	8380 3765 0294 5360	N/A	N/A
A	USB-A to Type-C Cable	N/A	N/A	N/A	N/A	N/A

1.8 TEST SETUP DIAGRAM



1.9 TEST PROGRAM

The EUT connection corresponds to the surrounding fixture control board.

This EUT uses "QRCT4 v4.0" 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, RSS-247 Issue 3 and RSS-GEN Issue 5.



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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)(d)	15.247(b)(3)	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.

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3. DESCRIPTION OF TEST MODES

3.1 THE WORST MODE OF OPERATING CONDITION

Operation mode	IEEE 802.11b mode:1Mbps IEEE 802.11g mode:6Mbps IEEE 802.11n HT20 mode: MCS0 IEEE 802.11n HT40 mode: MCS0
Test Channel Frequencies	IEEE 802.11b mode : Low CH: 2412 MHz Mid CH: 2437 MHz High CH: 2462 MHz IEEE 802.11g mode : Low CH: 2412 MHz Mid CH: 2437 MHz High CH: 2462 MHz IEEE 802.11n HT20 mode : Low CH: 2412 MHz Mid CH: 2437 MHz High CH: 2462 MHz IEEE 802.11n HT40 mode : 1. Lowest Channel: 2422 MHz 2. Middle Channel: 2437MHz 3. Highest Channel: 2452 MHz
Operation Transmitter	IEEE 802.11b mode : 1T1R IEEE 802.11g mode : 1T1R IEEE 802.11n HT20 mode : 1T1R IEEE 802.11n HT40 mode : 1T1R

Remark:

1. EUT pre-scanned data rate of output power for each mode, the worst data rate were recorded in this report.
2. The worst-case data rates are determined to be as follows for each mode based upon investigations by measuring the average power and PSD across all data rates, bandwidths, and modulations.

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 Mode 2: EUT Power by Adapter(TTT)+USB-A Mode 3: EUT Power by Adapter(LUCENT TRANS)+USB-A
Worst Mode	☒ Mode 1 ☒ Mode 2 ☐ Mode 3 ☐ Mode 4

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

Radiated Emission Measurement Below 1G	
Test Condition	Radiated Emission Below 1G
Power supply Mode	Mode 1: EUT Power by Adapter(LUCENT TRANS)+Type-C Mode 2: EUT Power by Adapter(TTT)+USB-A Mode 3: EUT Power by Car charger(12V)+Type-C+Cradle Mode 4: EUT Power by Car charger(24V)+Type-C+Cradle Mode 5: EUT Power by Cradle(12V) Mode 6: EUT Power by Cradle(24V) Mode 7: EUT Power by Host System
Worst Mode	☒ Mode 1 ☐ Mode 2 ☐ Mode 3 ☐ Mode 4 ☐ Mode 5 ☐ Mode 6 ☐ Mode 7

Radiated Emission Measurement [Co-Location]	
Test Condition	Radiated Emission [Co-Location]
Power supply Mode	Mode 1: EUT Power by NFC+Wi-Fi+LTE_Band2 Mode 2: EUT Power by NFC+Wi-Fi+LTE_Band13
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
4. The platform device has an NFC transmitter and a WLAN&WWAN 's module, which evaluates Radiated Emission based on co-location.

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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

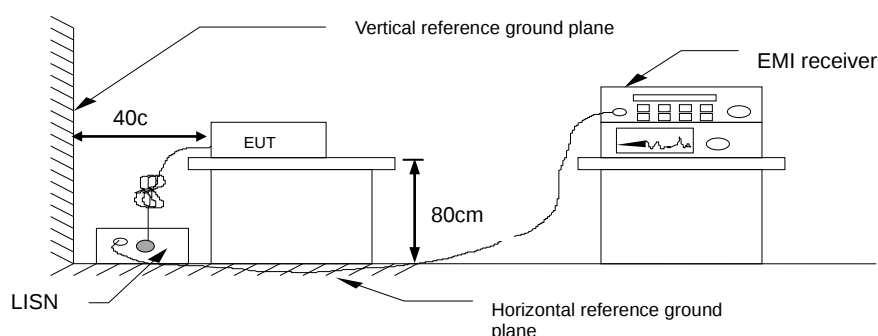
* Decreases with the logarithm of the frequency.

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.

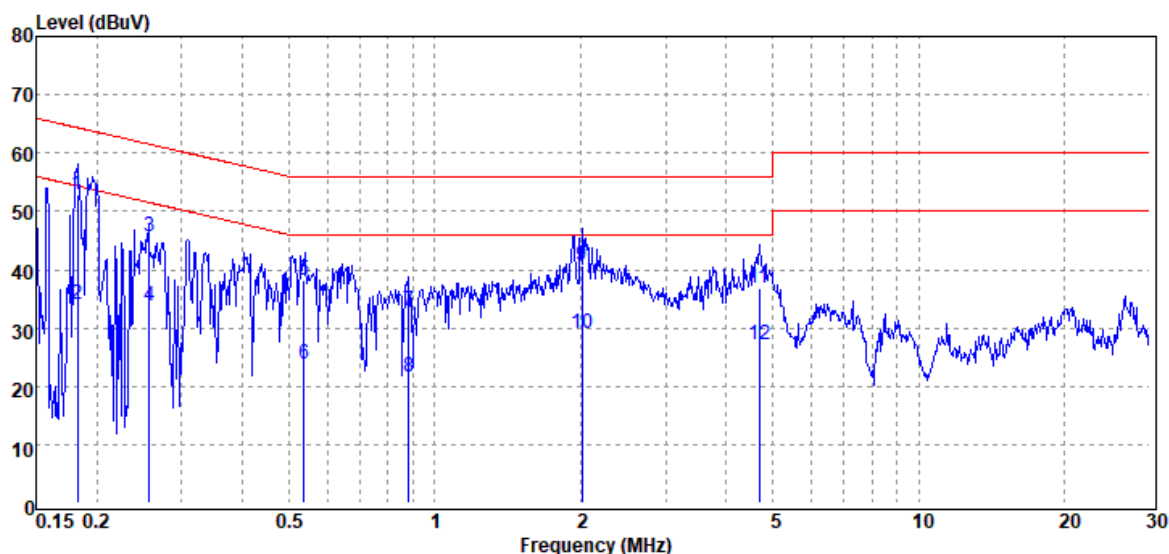
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Test Data

Project No : TM-2405000413P
Operation Mode : 2.4G
Test Chamber : Conduction
Probe : LINE
Note : Mode 1

Test Date : 2024-07-08
Temp./Humi. : 23.4°C / 54%
Engineer : Ben Yang
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
0.183	QP	52.69	0.12	52.81	64.37	-11.56
0.183	Average	33.93	0.12	34.05	54.37	-20.32
0.257	QP	45.42	0.12	45.54	61.54	-16.00
0.257	Average	33.65	0.12	33.77	51.54	-17.77
0.537	QP	38.14	0.11	38.25	56.00	-17.75
0.537	Average	23.81	0.11	23.92	46.00	-22.08
0.884	QP	32.87	0.12	32.99	56.00	-23.01
0.884	Average	21.41	0.12	21.53	46.00	-24.47
2.016	QP	40.58	0.15	40.73	56.00	-15.27
2.016	Average	29.00	0.15	29.15	46.00	-16.85
4.690	QP	36.50	0.23	36.73	56.00	-19.27
4.690	Average	26.80	0.23	27.03	46.00	-18.97

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

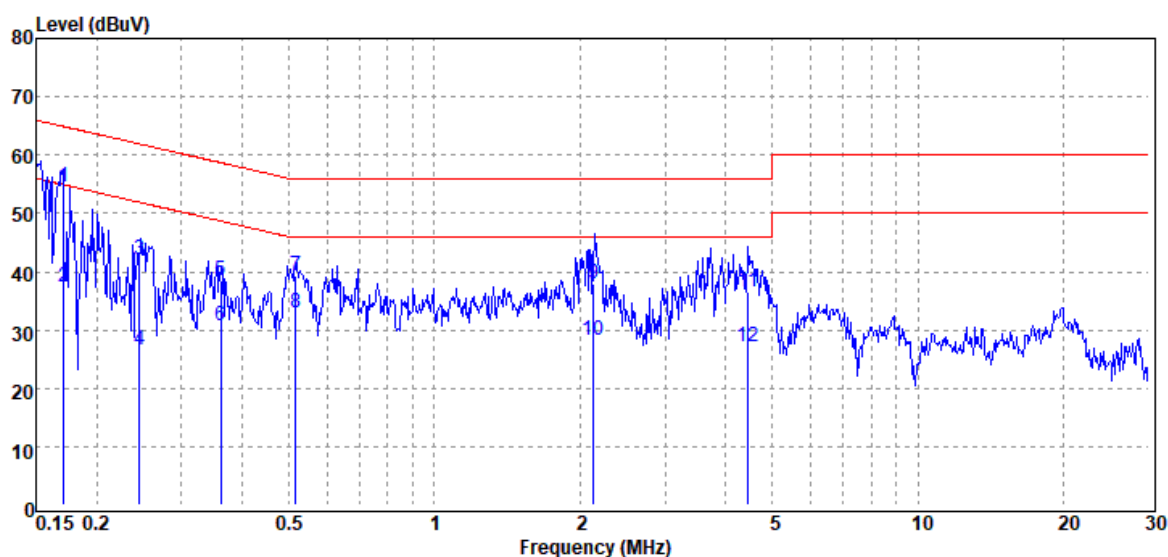
Note: 2. Margin= Actual FS - Limit

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Project No : TM-2405000413P
Operation Mode : 2.4G
Test Chamber : Conduction
Probe : NEUTRAL
Note : Mode 1

Test Date : 2024-07-08
Temp./Humi. : 23.4°C / 54%
Engineer : Ben Yang
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
0.171	QP	54.56	0.10	54.66	64.91	-10.25
0.171	Average	37.14	0.10	37.24	54.91	-17.67
0.246	QP	42.05	0.09	42.14	61.90	-19.76
0.246	Average	26.36	0.09	26.45	51.90	-25.45
0.362	QP	38.43	0.08	38.51	58.68	-20.17
0.362	Average	30.52	0.08	30.60	48.68	-18.08
0.517	QP	39.18	0.08	39.26	56.00	-16.74
0.517	Average	32.93	0.08	33.01	46.00	-12.99
2.133	QP	37.67	0.13	37.80	56.00	-18.20
2.133	Average	28.05	0.13	28.18	46.00	-17.82
4.461	QP	36.36	0.20	36.56	56.00	-19.44
4.461	Average	27.05	0.20	27.25	46.00	-18.75

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

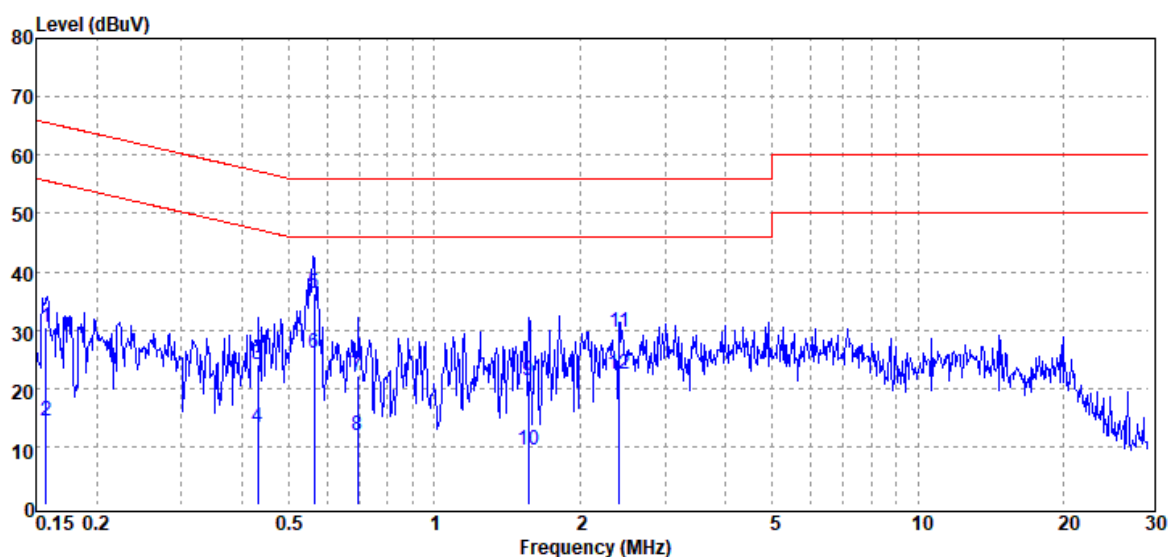
Note: 2. Margin= Actual FS - Limit

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Project No : TM-2405000413P
Operation Mode : 2.4G
Test Chamber : Conduction
Probe : LINE
Note : Mode 2

Test Date : 2024-07-10
Temp./Humi. : 23.4°C / 54%
Engineer : Ben Yang
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
0.157	QP	30.23	0.17	30.40	65.60	-35.20
0.157	Average	14.30	0.17	14.47	55.60	-41.13
0.432	QP	23.67	0.38	24.05	57.22	-33.17
0.432	Average	12.94	0.38	13.32	47.22	-33.90
0.564	QP	35.85	0.38	36.23	56.00	-19.77
0.564	Average	25.61	0.38	25.99	46.00	-20.01
0.694	QP	21.68	0.39	22.07	56.00	-33.93
0.694	Average	11.59	0.39	11.98	46.00	-34.02
1.561	QP	21.06	0.18	21.24	56.00	-34.76
1.561	Average	9.13	0.18	9.31	46.00	-36.69
2.416	QP	29.49	0.20	29.69	56.00	-26.31
2.416	Average	22.15	0.20	22.35	46.00	-23.65

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

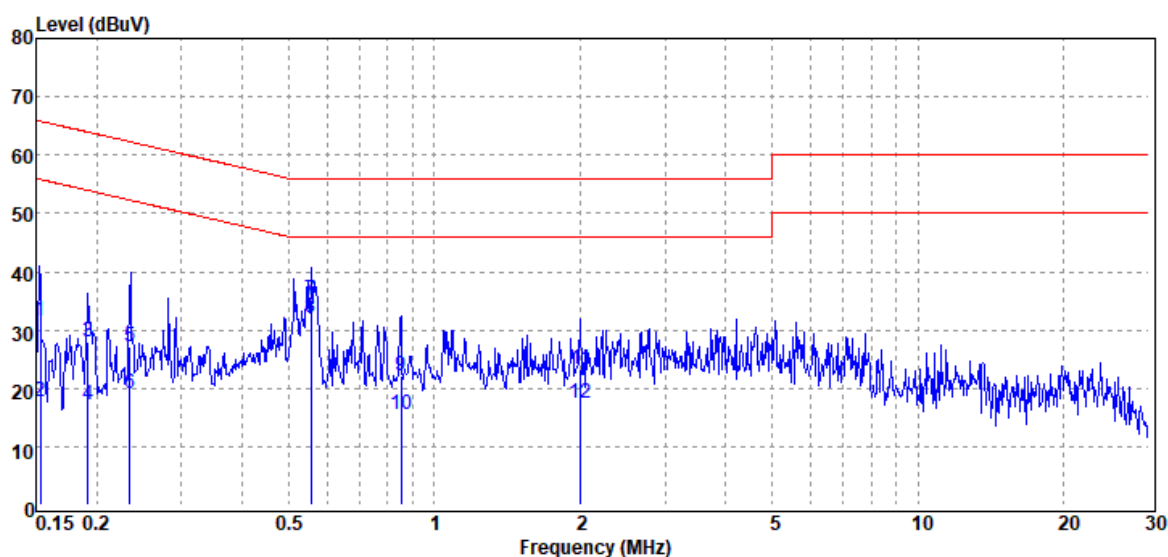
Note: 2. Margin= Actual FS - Limit

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Project No : TM-2405000413P
Operation Mode : 2.4G
Test Chamber : Conduction
Probe : NEUTRAL
Note : Mode 2

Test Date : 2024-07-10
Temp./Humi. : 23.4°C / 54%
Engineer : Ben Yang
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
0.153	QP	31.54	0.12	31.66	65.83	-34.17
0.153	Average	17.71	0.12	17.83	55.83	-38.00
0.192	QP	27.62	0.32	27.94	63.96	-36.02
0.192	Average	16.84	0.32	17.16	53.96	-36.80
0.235	QP	26.65	0.36	27.01	62.29	-35.28
0.235	Average	18.79	0.36	19.15	52.29	-33.14
0.557	QP	34.93	0.35	35.28	56.00	-20.72
0.557	Average	31.73	0.35	32.08	46.00	-13.92
0.852	QP	21.73	0.36	22.09	56.00	-33.91
0.852	Average	15.27	0.36	15.63	46.00	-30.37
2.007	QP	23.03	0.16	23.19	56.00	-32.81
2.007	Average	17.20	0.16	17.36	46.00	-28.64

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

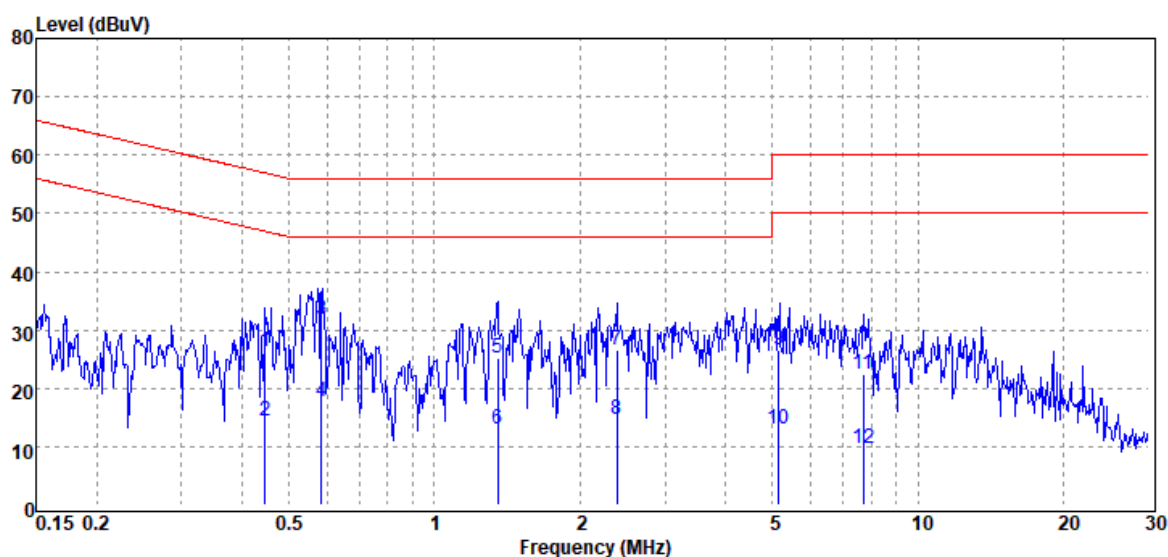
Note: 2. Margin= Actual FS - Limit

Report No.: TMWK2406002103KR

Rev.: 00

Project No : TM-2405000413P
Operation Mode : 2.4G
Test Chamber : Conduction
Probe : LINE
Note : Mode 2

Test Date : 2024-07-10
Temp./Humi. : 23.4°C / 54%
Engineer : Ben Yang
Test Voltage : AC 230V/60Hz



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dBμV	Factor dB	Actual FS dBμV	Limit dBμV	Margin dB
0.447	QP	25.94	0.38	26.32	56.93	-30.61
0.447	Average	13.98	0.38	14.36	46.93	-32.57
0.583	QP	31.35	0.38	31.73	56.00	-24.27
0.583	Average	17.23	0.38	17.61	46.00	-28.39
1.355	QP	24.92	0.16	25.08	56.00	-30.92
1.355	Average	12.79	0.16	12.95	46.00	-33.05
2.386	QP	26.32	0.20	26.52	56.00	-29.48
2.386	Average	14.35	0.20	14.55	46.00	-31.45
5.148	QP	26.19	0.27	26.46	60.00	-33.54
5.148	Average	12.71	0.27	12.98	50.00	-37.02
7.694	QP	22.05	0.33	22.38	60.00	-37.62
7.694	Average	9.44	0.33	9.77	50.00	-40.23

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

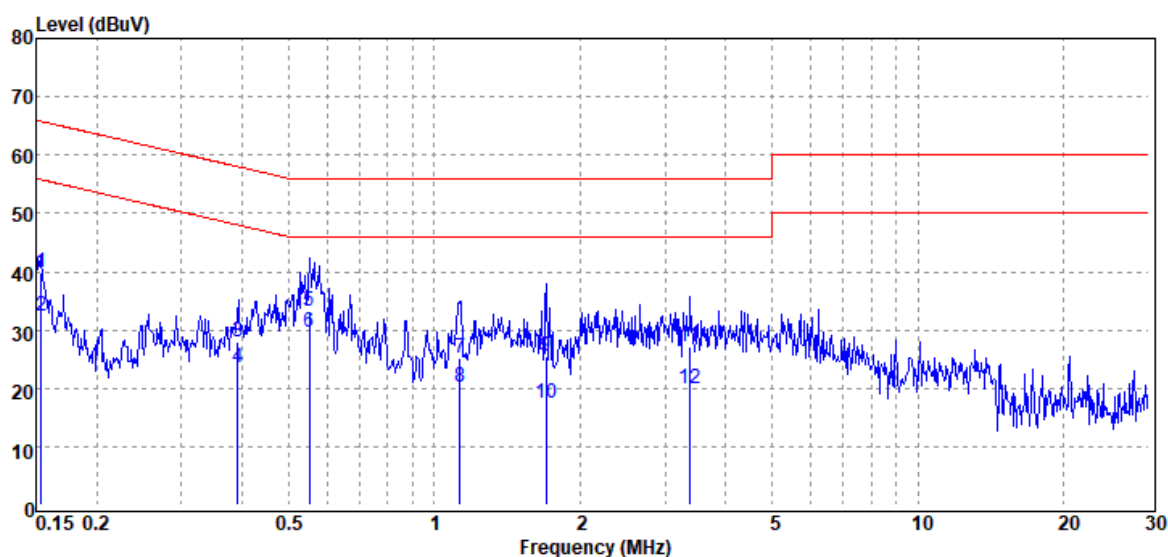
Note: 2. Margin= Actual FS - Limit

Report No.: TMWK2406002103KR

Rev.: 00

Project No : TM-2405000413P
Operation Mode : 2.4G
Test Chamber : Conduction
Probe : NEUTRAL
Note : Mode 2

Test Date : 2024-07-10
Temp./Humi. : 23.4°C / 54%
Engineer : Ben Yang
Test Voltage : AC 230V/60Hz



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dBμV	Factor dB	Actual FS dBμV	Limit dBμV	Margin dB
0.154	QP	39.79	0.12	39.91	65.79	-25.88
0.154	Average	32.28	0.12	32.40	55.79	-23.39
0.392	QP	27.63	0.35	27.98	58.02	-30.04
0.392	Average	23.30	0.35	23.65	48.02	-24.37
0.551	QP	32.84	0.35	33.19	56.00	-22.81
0.551	Average	29.16	0.35	29.51	46.00	-16.49
1.131	QP	25.10	0.13	25.23	56.00	-30.77
1.131	Average	19.96	0.13	20.09	46.00	-25.91
1.700	QP	25.28	0.16	25.44	56.00	-30.56
1.700	Average	17.19	0.16	17.35	46.00	-28.65
3.366	QP	26.95	0.19	27.14	56.00	-28.86
3.366	Average	19.81	0.19	20.00	46.00	-26.00

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

Note: 2. Margin= Actual FS - Limit

Report No.: TMWK2406002103KR

4.2 OUTPUT POWER MEASUREMENT

4.2.1 Test Limit

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

Peak output power :

For FCC:

For systems using digital modulation in the 2400-2483.5 MHz, and 5725-5850 MHz bands: 1 Watt(30 dBm) and the e.i.r.p. shall not exceed 4Watt(36 dBm), base on the use of antennas with directional gain not exceed 6 dBi If transmitting antennas of directional gain greater than 6dBi are used the peak output power the conducted output power from the intentional radiator shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. In case of point-to-point operation, the limit has to be reduced by 1dB for every 3 dB that the directional gain of the antenna exceeds 6 dBi.

For IC:

For DTSSs employing digital modulation techniques operating in the bands 902-928 MHz and 2400-2483.5 MHz, the maximum peak conducted output power shall not exceed 1 W. The e.i.r.p. shall not exceed 4 W, except as provided in section 5.4(e).

Limit	☒ Antenna not exceed 6 dBi : 30dBm ☐ Antenna with DG greater than 6 dBi : [Limit = 30 – (DG – 6)] ☐ Point-to-point operation :
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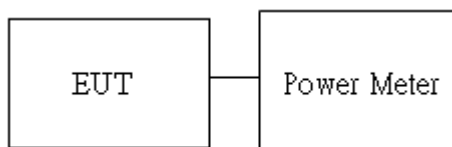
Average output power : For reporting purposes only.

4.2.2 Test Procedure

Test method Refer as ANSI C63.10:2013.

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

4.2.3 Test Setup





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4.2.4 Test Result

Temperature: 21.6 ~ 25.3°C

Test date: June 20 ~ July 8, 2024

Humidity: 53 ~ 62% RH

Tested by: Marco Chan

Peak & Average output power :

802.11b Ch0							
CH	Freq. (MHz)	Data Rate	Power Setting	Peak Output Power (mW)	Peak Output Power (dBm)	Limit (dBm)	RESULT
1	2412	1	19	62.81	17.98	30.00	PASS
6	2437	1	19.5	64.12	18.07	30.00	PASS
11	2462	1	19.5	65.31	18.15	30.00	PASS
802.11b Ch0							
CH	Freq. (MHz)	Data Rate	Power Setting	Avg. Output Power (mW)	Avg. Output Power (dBm)	Limit (dBm)	RESULT
1	2412	1	19	37.08	15.69	30.00	PASS
6	2437	1	19.5	38.74	15.88	30.00	PASS
11	2462	1	19.5	38.56	15.86	30.00	PASS
802.11g Ch0							
CH	Freq. (MHz)	Data Rate	Power Setting	Peak Output Power (mW)	Peak Output Power (dBm)	Limit (dBm)	RESULT
1	2412	6	14	39.26	15.94	30.00	PASS
6	2437	6	19	86.30	19.36	30.00	PASS
11	2462	6	15.5	55.46	17.44	30.00	PASS
802.11g Ch0							
CH	Freq. (MHz)	Data Rate	Power Setting	Avg. Output Power (mW)	Avg. Output Power (dBm)	Limit (dBm)	RESULT
1	2412	6	14	12.86	11.09	30.00	PASS
6	2437	6	19	31.25	14.95	30.00	PASS
11	2462	6	15.5	17.78	12.50	30.00	PASS

802.11n_HT_20M Ch0

CH	Freq. (MHz)	Data Rate	Power Setting	Peak Output Power (mW)	Peak Output Power (dBm)	Limit (dBm)	RESULT
1	2412	MCS0	13.5	34.51	15.38	30.00	PASS
6	2437	MCS0	19	86.30	19.36	30.00	PASS
11	2462	MCS0	14.5	45.92	16.62	30.00	PASS

802.11n_HT_20M Ch0

CH	Freq. (MHz)	Data Rate	Power Setting	Avg. Output Power (mW)	Avg. Output Power (dBm)	Limit (dBm)	RESULT
1	2412	MCS0	13.5	11.27	10.52	30.00	PASS
6	2437	MCS0	19	30.28	14.81	30.00	PASS
11	2462	MCS0	14.5	13.62	11.34	30.00	PASS

802.11n_HT_40M Ch0

CH	Freq. (MHz)	Data Rate	Power Setting	Peak Output Power (mW)	Peak Output Power (dBm)	Limit (dBm)	RESULT
3	2422	MCS0	11.5	32.43	15.11	30.00	PASS
6	2437	MCS0	17	98.86	19.95	30.00	PASS
9	2452	MCS0	11.5	34.51	15.38	30.00	PASS

802.11n_HT_40M Ch0

CH	Freq. (MHz)	Data Rate	Power Setting	Avg. Output Power (mW)	Avg. Output Power (dBm)	Limit (dBm)	RESULT
3	2422	MCS0	11.5	8.70	9.40	30.00	PASS
6	2437	MCS0	17	24.13	13.83	30.00	PASS
9	2452	MCS0	11.5	8.74	9.42	30.00	PASS

EIRP Power

802.11b Ch0							
CH	Freq. (MHz)	Data Rate	Avg. Output Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	RESULT
1	2412	1	15.69	0.44	16.13	36	PASS
6	2437	1	15.88	0.44	16.32	36	PASS
11	2462	1	15.86	0.44	16.30	36	PASS

802.11g Ch0							
CH	Freq. (MHz)	Data Rate	Avg. Output Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	RESULT
1	2412	6	11.09	0.44	11.53	36	PASS
6	2437	6	14.95	0.44	15.39	36	PASS
11	2462	6	12.50	0.44	12.94	36	PASS

802.11n_HT_20M Ch0							
CH	Freq. (MHz)	Data Rate	Avg. Output Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	RESULT
1	2412	MCS0	10.52	0.44	10.96	36	PASS
6	2437	MCS0	14.81	0.44	15.25	36	PASS
11	2462	MCS0	11.34	0.44	11.78	36	PASS

802.11n_HT_40M Ch0							
CH	Freq. (MHz)	Data Rate	Avg. Output Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	RESULT
3	2422	MCS0	9.40	0.44	9.84	36	PASS
6	2437	MCS0	13.83	0.44	14.27	36	PASS
9	2452	MCS0	9.42	0.44	9.86	36	PASS

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4.3 RADIATION BANDEGE 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	Field Strength (microvolts/m)	Measurement Distance (metres)
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

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) (μA/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.

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4.3.2 Test Procedure

Test method Refer as ANSI C63.10:2013.

1. The EUT is placed on a turntable, 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 1GHz set to high power channels with the EUT transmit.

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

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.

4. 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 $\geq$ 3 RBW, Sweep = Auto, Detector = Peak, Trace = Max hold.

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

'If Duty Cycle $\geq$ 98%, VBW=10Hz.

'If Duty Cycle < 98%, VBW=1/T.

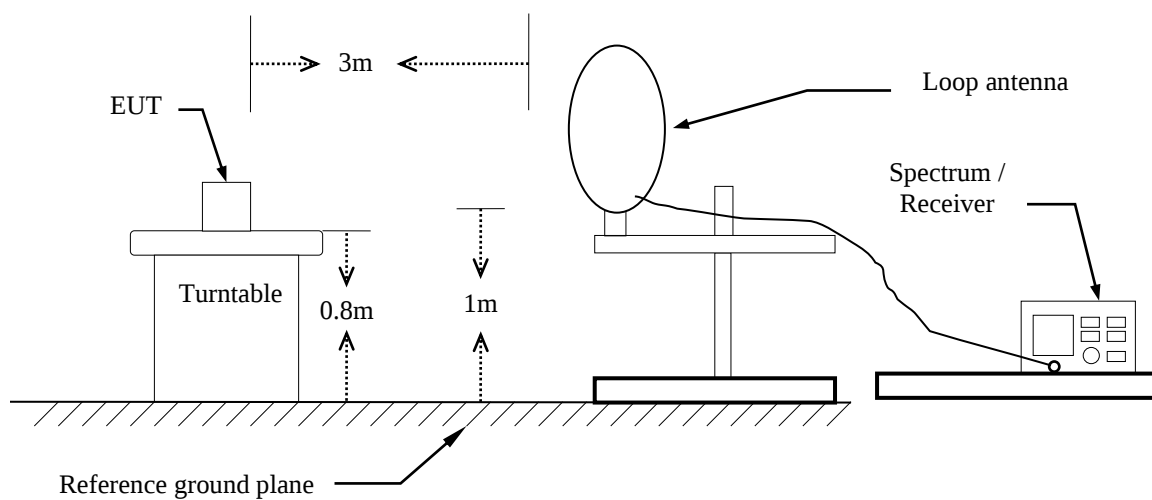
5. Data result :

Actual FS=Spectrum Reading Level + Factor

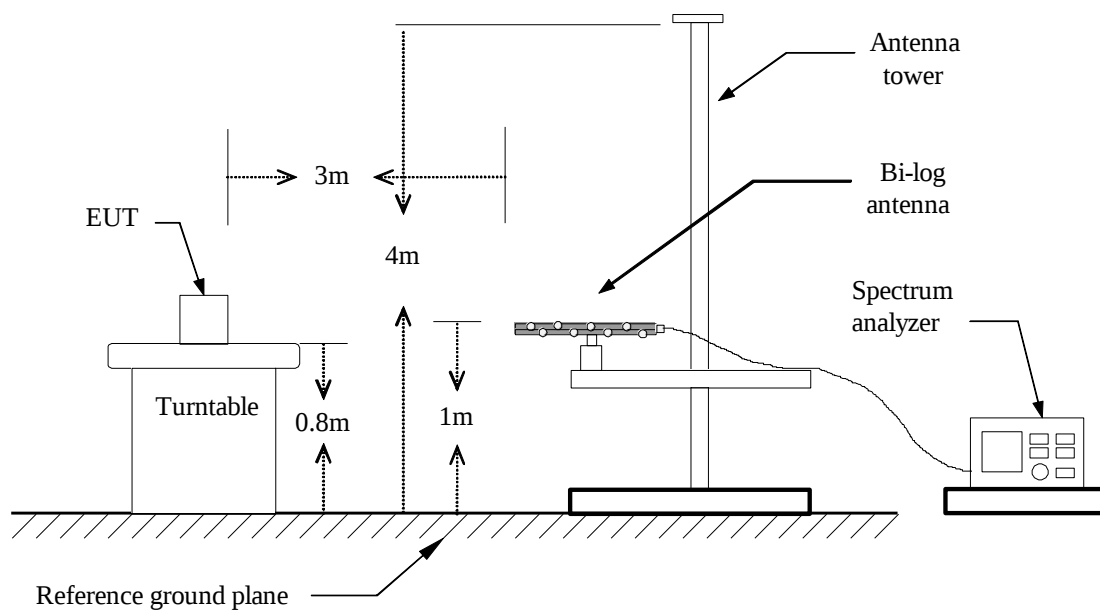
Margin=Actual FS- Limit

4.3.3 Test Setup

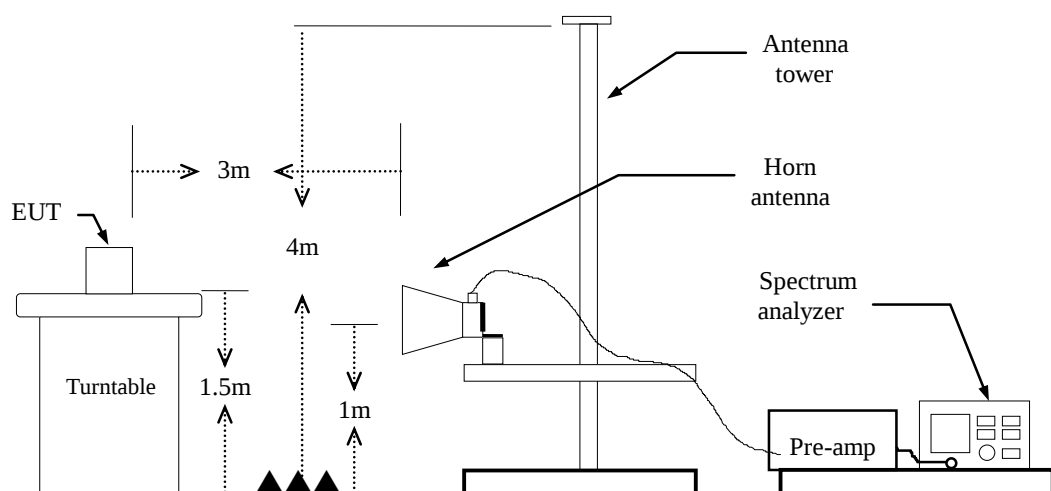
9kHz ~ 30MHz



30MHz ~ 1GHz



Above 1 GHz

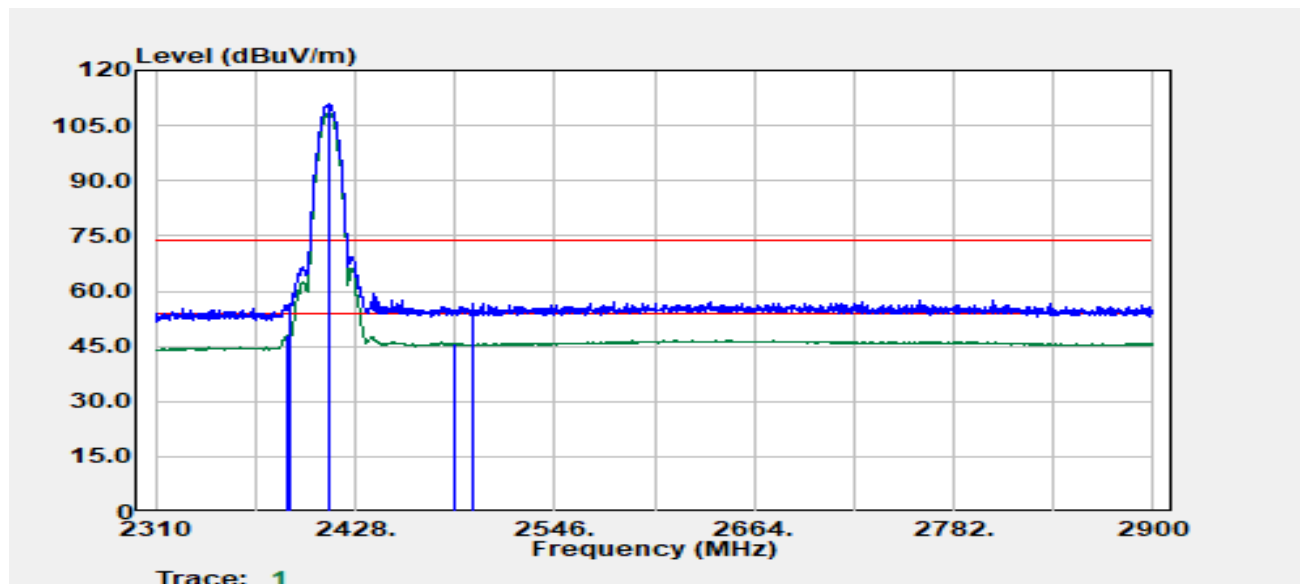


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4.3.4 Test Result

Band Edge Test Data

Project No	:TM-2405000413P	Test Date	:2024-06-28
Operation Band	:802.11b	Temp./Humi.	:24.6/57
Frequency	:2412 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:Bandedge	Engineer	:Tony Chao
EUT Pol	:H	Test Chamber	: 966A
Setting	:19		



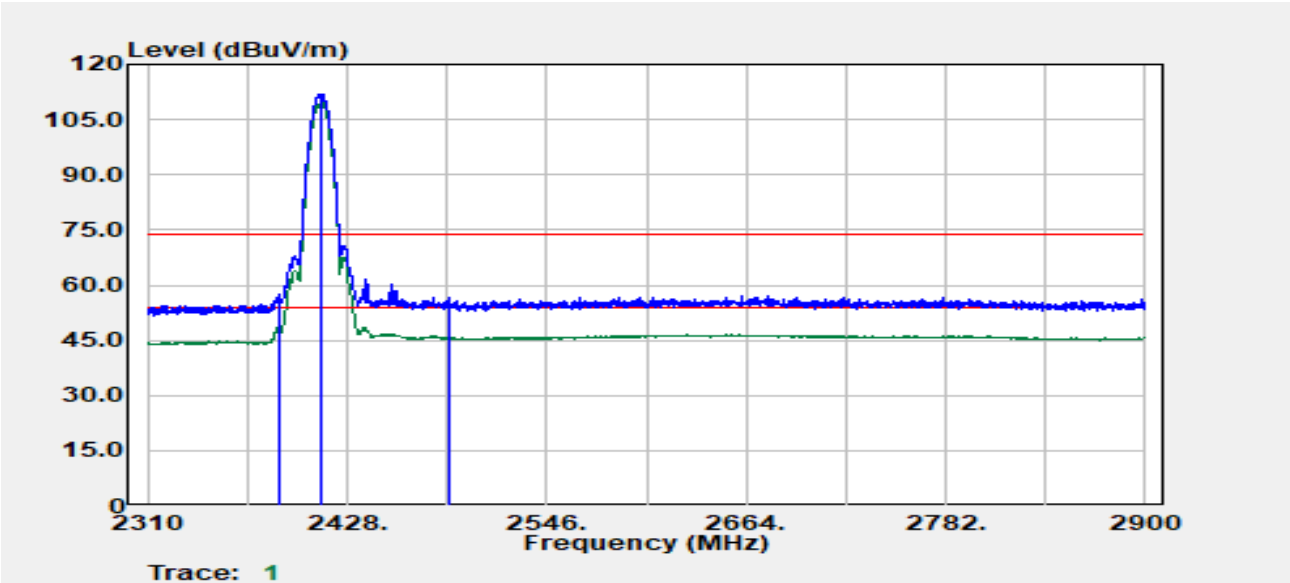
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dBμV	Factor dB	Actual FS dBμV/m	Limit dBμV/m	Margin dB
2387.53	Average	41.88	6.23	48.11	54.00	-5.89
2390.00	Peak	50.28	6.28	56.56	74.00	-17.44
2412.00	Peak	104.50	6.31	110.81	--	--
2412.00	Average	102.03	6.31	108.34	--	--
2487.08	Average	38.93	6.76	45.69	54.00	-8.31
2497.58	Peak	49.87	6.83	56.70	74.00	-17.30



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Project No	:TM-2405000413P	Test Date	:2024-06-28
Operation Band	:802.11b	Temp./Humi.	:24.6/57
Frequency	:2412 MHz	Antenna Pol.	:HORIZONTAL
Operation Mode	:Bandedge	Engineer	:Tony Chao
EUT Pol	:H	Test Chamber	: 966A
Setting	:19		



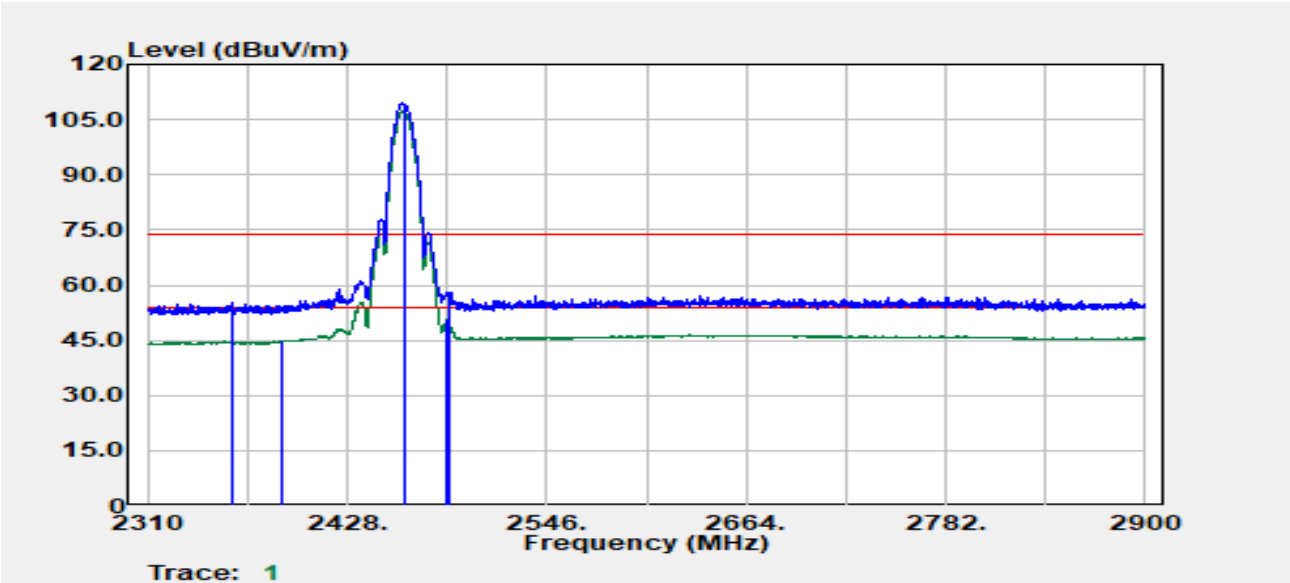
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dBμV	Factor dB	Actual FS dBUV/m	Limit dBUV/m	Margin dB
2388.03	Peak	51.35	6.24	57.59	74.00	-16.41
2388.03	Average	42.39	6.24	48.63	54.00	-5.37
2412.00	Peak	105.63	6.31	111.93	--	--
2412.00	Average	103.17	6.31	109.47	--	--
2487.58	Peak	49.87	6.77	56.64	74.00	-17.36
2489.08	Average	38.97	6.79	45.76	54.00	-8.24



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Project No	:TM-2405000413P	Test Date	:2024-06-28
Operation Band	:802.11b	Temp./Humi.	:24.6/57
Frequency	:2462 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:Bandedge	Engineer	:Tony Chao
EUT Pol	:H	Test Chamber	: 966A
Setting	:19.5		

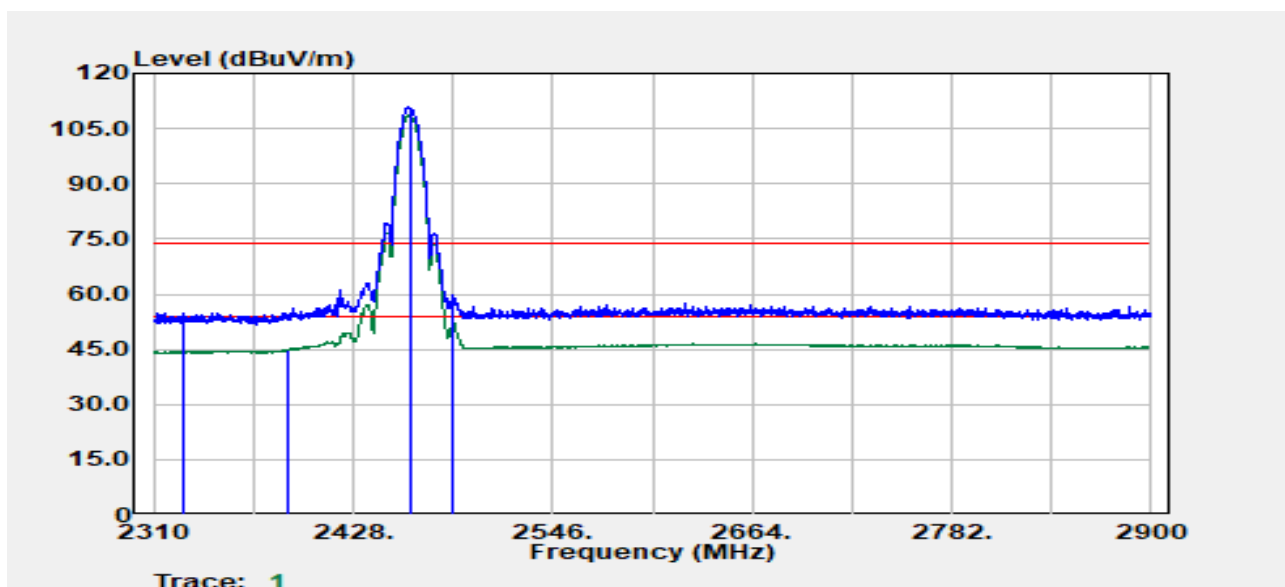


Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dBμV	Factor dB	Actual FS dBμV/m	Limit dBμV/m	Margin dB
2359.77	Peak	48.79	6.25	55.04	74.00	-18.96
2389.03	Average	38.67	6.26	44.93	54.00	-9.07
2462.00	Peak	103.39	6.32	109.71	--	--
2462.00	Average	100.98	6.32	107.30	--	--
2487.08	Average	43.88	6.76	50.64	54.00	-3.36
2487.58	Peak	51.26	6.77	58.03	74.00	-15.97

Report No.: TMWK2406002103KR

Project No :TM-2405000413P
Operation Band :802.11b
Frequency :2462 MHz
Operation Mode :Bandedge
EUT Pol :H
Setting :19.5

Test Date :2024-06-28
Temp./Humi. :24.6/57
Antenna Pol. :HORIZONTAL
Engineer :Tony Chao
Test Chamber : 966A



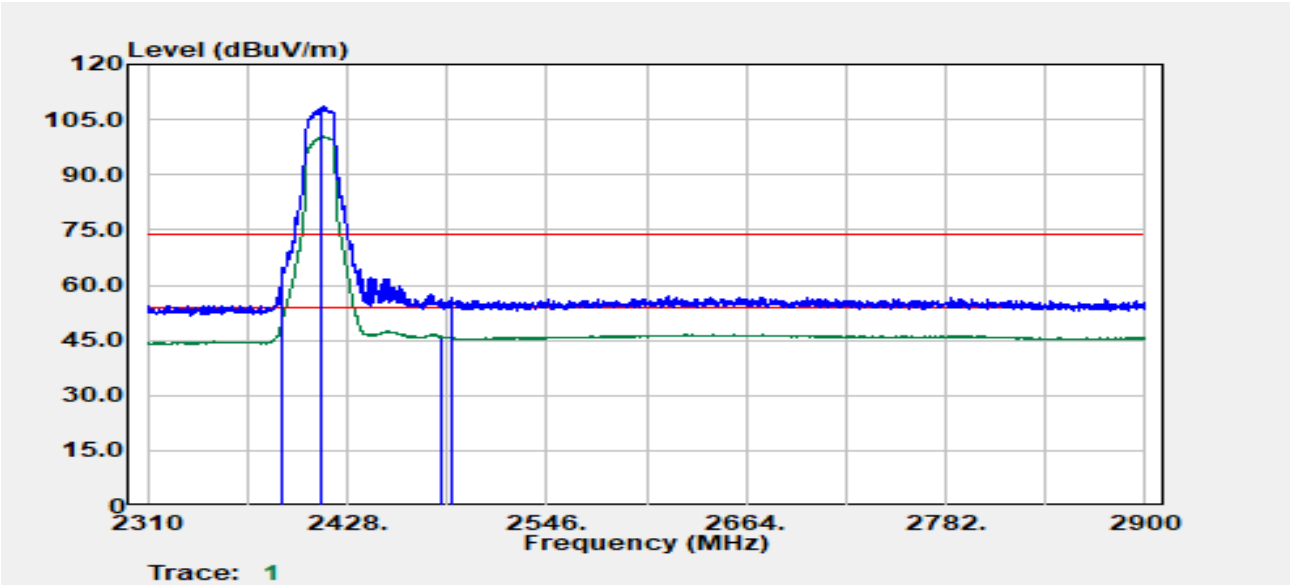
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dBμV	Factor dB	Actual FS dBμV/m	Limit dBμV/m	Margin dB
2328.01	Peak	48.76	6.18	54.94	74.00	-19.06
2389.78	Average	38.72	6.28	45.00	54.00	-9.00
2462.00	Peak	104.72	6.32	111.04	--	--
2462.00	Average	102.24	6.32	108.56	--	--
2487.08	Average	45.44	6.76	52.20	54.00	-1.80
2487.33	Peak	52.83	6.77	59.59	74.00	-14.41



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Project No	:TM-2405000413P	Test Date	:2024-06-28
Operation Band	:802.11g	Temp./Humi.	:24.6/57
Frequency	:2412 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:Bandedge	Engineer	:Tony Chao
EUT Pol	:H	Test Chamber	: 966A
Setting	:14		



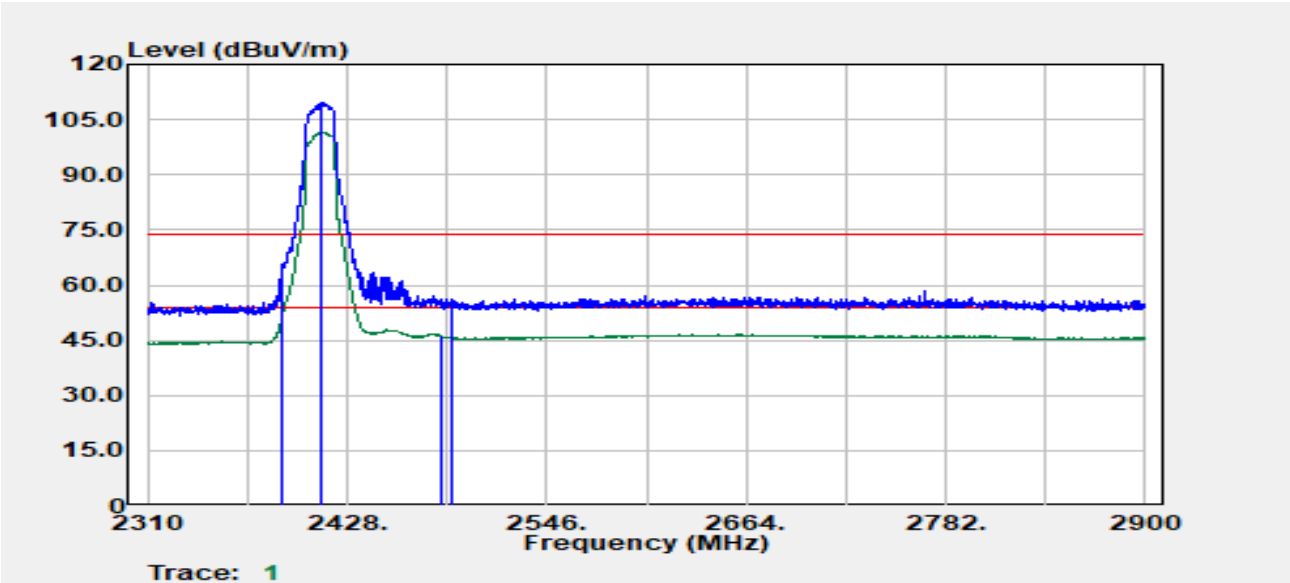
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dBμV	Factor dB	Actual FS dBμV/m	Limit dBμV/m	Margin dB
2389.90	Peak	58.68	6.28	64.95	74.00	-9.05
2389.90	Average	45.29	6.28	51.57	54.00	-2.43
2412.00	Peak	102.42	6.31	108.72	--	--
2412.00	Average	94.32	6.31	100.63	--	--
2483.53	Average	39.18	6.71	45.90	54.00	-8.10
2489.52	Peak	49.61	6.80	56.41	74.00	-17.59



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Project No	:TM-2405000413P	Test Date	:2024-06-28
Operation Band	:802.11g	Temp./Humi.	:24.6/57
Frequency	:2412 MHz	Antenna Pol.	:HORIZONTAL
Operation Mode	:Bandedge	Engineer	:Tony Chao
EUT Pol	:H	Test Chamber	: 966A
Setting	:14		

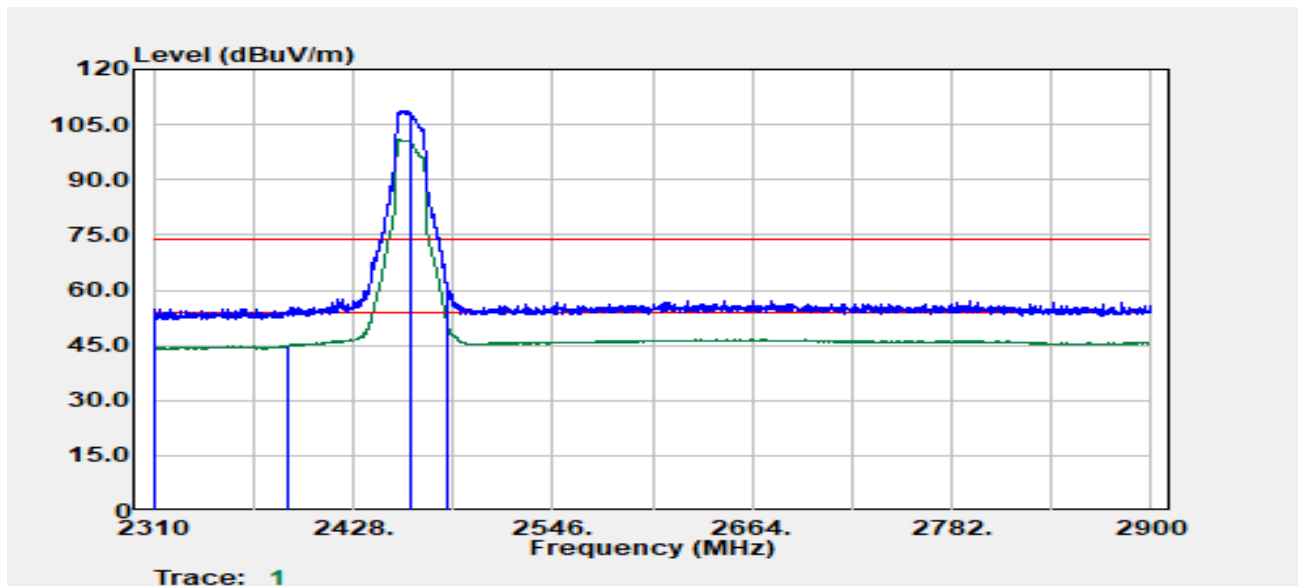


Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dBμV	Factor dB	Actual FS dBμV/m	Limit dBμV/m	Margin dB
2389.90	Peak	58.12	6.28	64.40	74.00	-9.60
2389.90	Average	46.30	6.28	52.58	54.00	-1.42
2412.00	Peak	103.48	6.31	109.78	--	--
2412.00	Average	95.32	6.31	101.63	--	--
2484.03	Average	39.27	6.72	45.99	54.00	-8.01
2489.77	Peak	49.48	6.80	56.28	74.00	-17.72



Report No.: TMWK2406002103KR

Project No	:TM-2405000413P	Test Date	:2024-06-28
Operation Band	:802.11g	Temp./Humi.	:24.6/57
Frequency	:2462 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:Bandedge	Engineer	:Tony Chao
EUT Pol	:H	Test Chamber	: 966A
Setting	:15.5		



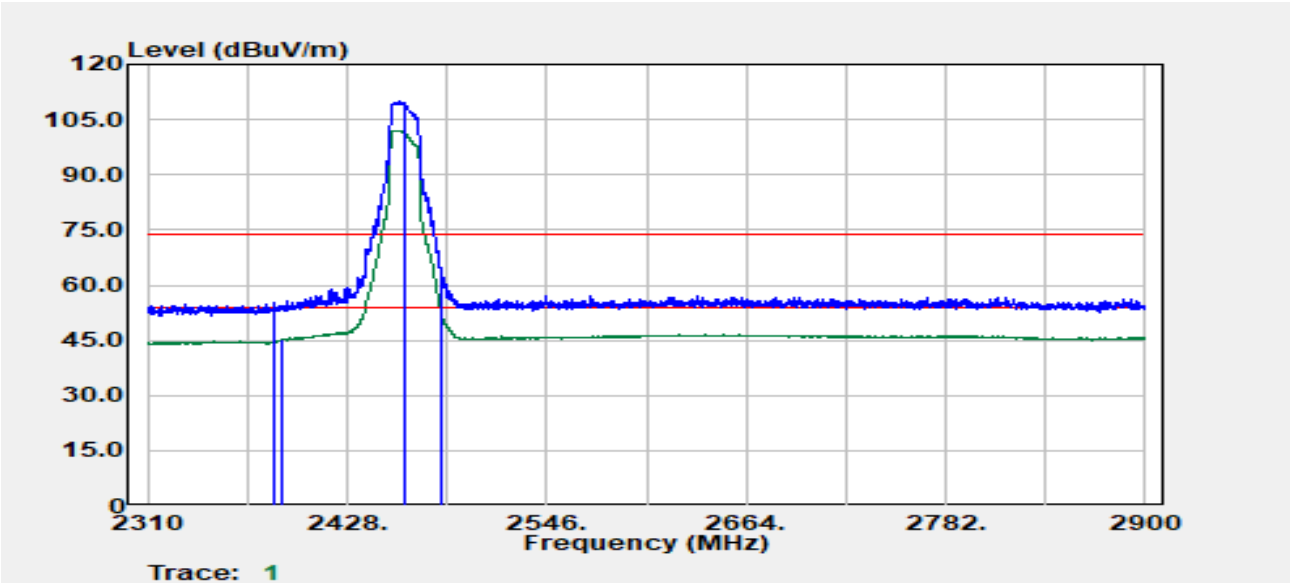
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dBμV	Factor dB	Actual FS dBμV/m	Limit dBμV/m	Margin dB
2310.75	Peak	48.83	6.13	54.96	74.00	-19.04
2388.90	Average	38.77	6.26	45.02	54.00	-8.98
2462.00	Peak	102.45	6.32	108.77	--	--
2462.00	Average	94.46	6.32	100.77	--	--
2483.53	Average	44.49	6.71	51.20	54.00	-2.80
2483.78	Peak	55.32	6.72	62.04	74.00	-11.96



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Project No	:TM-2405000413P	Test Date	:2024-06-28
Operation Band	:802.11g	Temp./Humi.	:24.6/57
Frequency	:2462 MHz	Antenna Pol.	:HORIZONTAL
Operation Mode	:Bandedge	Engineer	:Tony Chao
EUT Pol	:H	Test Chamber	: 966A
Setting	:15.5		



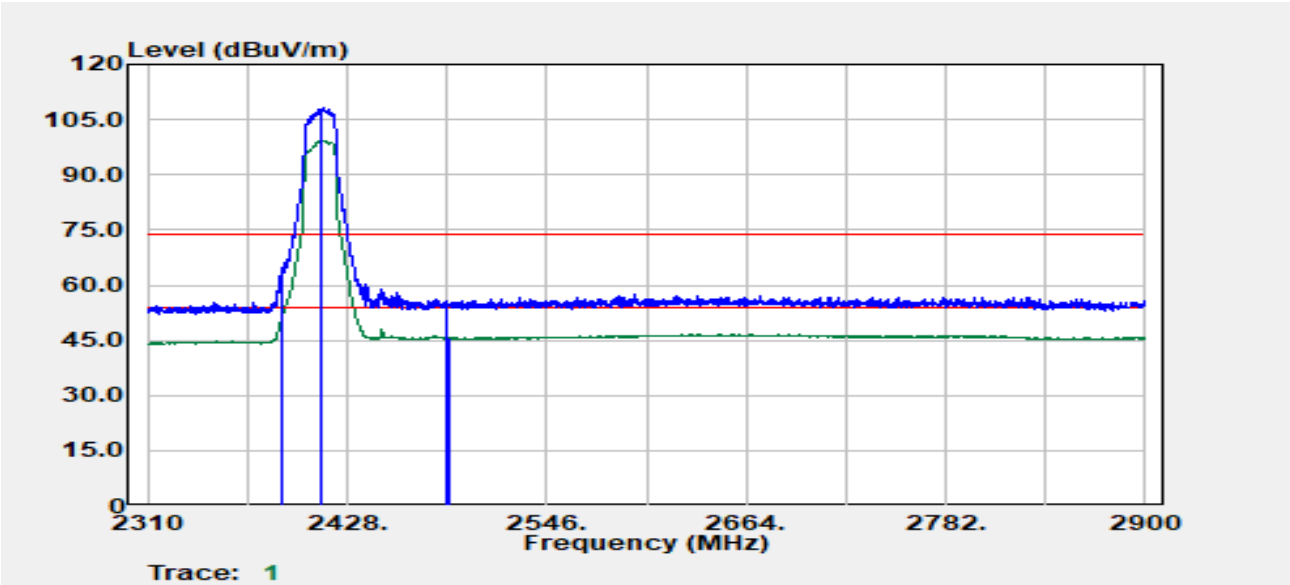
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dBμV	Factor dB	Actual FS dBUV/m	Limit dBUV/m	Margin dB
2384.41	Peak	49.06	6.16	55.23	74.00	-18.77
2389.15	Average	38.90	6.26	45.16	54.00	-8.84
2462.00	Peak	103.53	6.32	109.85	--	--
2462.00	Average	95.54	6.32	101.86	--	--
2483.53	Peak	58.23	6.71	64.94	74.00	-9.06
2483.53	Average	45.99	6.71	52.70	54.00	-1.30



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Project No	:TM-2405000413P	Test Date	:2024-06-28
Operation Band	:802.11n20	Temp./Humi.	:24.6/57
Frequency	:2412 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:Bandedge	Engineer	:Tony Chao
EUT Pol	:H	Test Chamber	: 966A
Setting	:13.5		



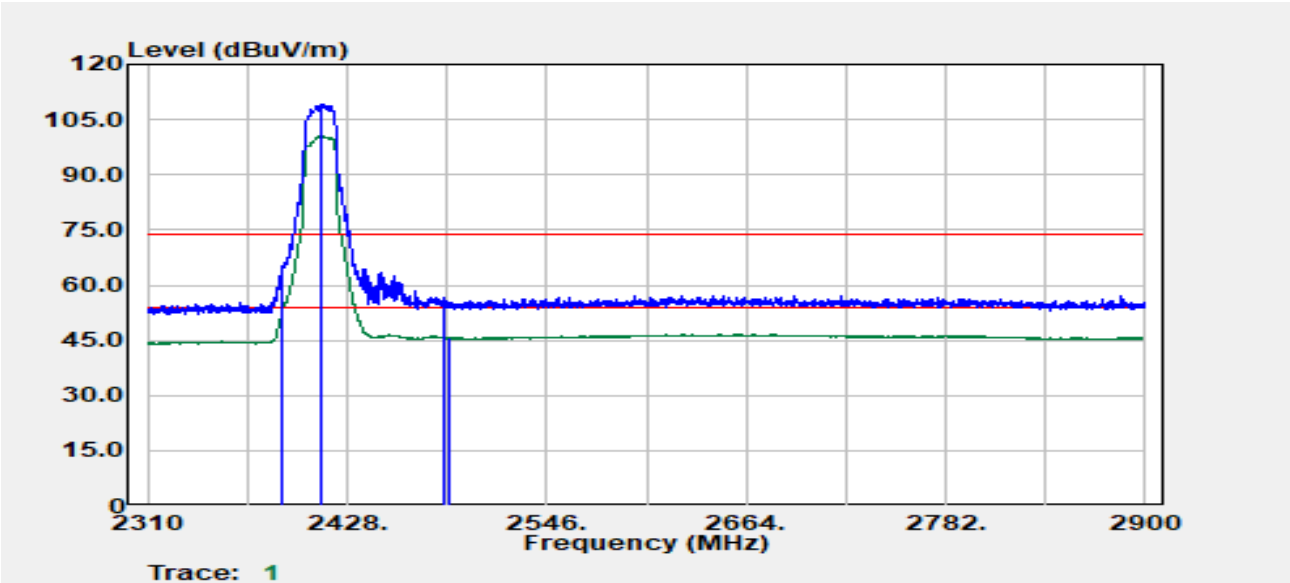
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dBμV	Factor dB	Actual FS dBUV/m	Limit dBUV/m	Margin dB
2389.40	Peak	58.51	6.27	64.77	74.00	-9.23
2389.90	Average	45.60	6.28	51.88	54.00	-2.12
2412.00	Peak	101.82	6.31	108.13	--	--
2412.00	Average	93.15	6.31	99.45	--	--
2487.28	Peak	48.84	6.77	55.61	74.00	-18.39
2488.02	Average	38.97	6.78	45.74	54.00	-8.26



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Project No	:TM-2405000413P	Test Date	:2024-06-28
Operation Band	:802.11n20	Temp./Humi.	:24.6/57
Frequency	:2412 MHz	Antenna Pol.	:HORIZONTAL
Operation Mode	:Bandedge	Engineer	:Tony Chao
EUT Pol	:H	Test Chamber	: 966A
Setting	:13.5		



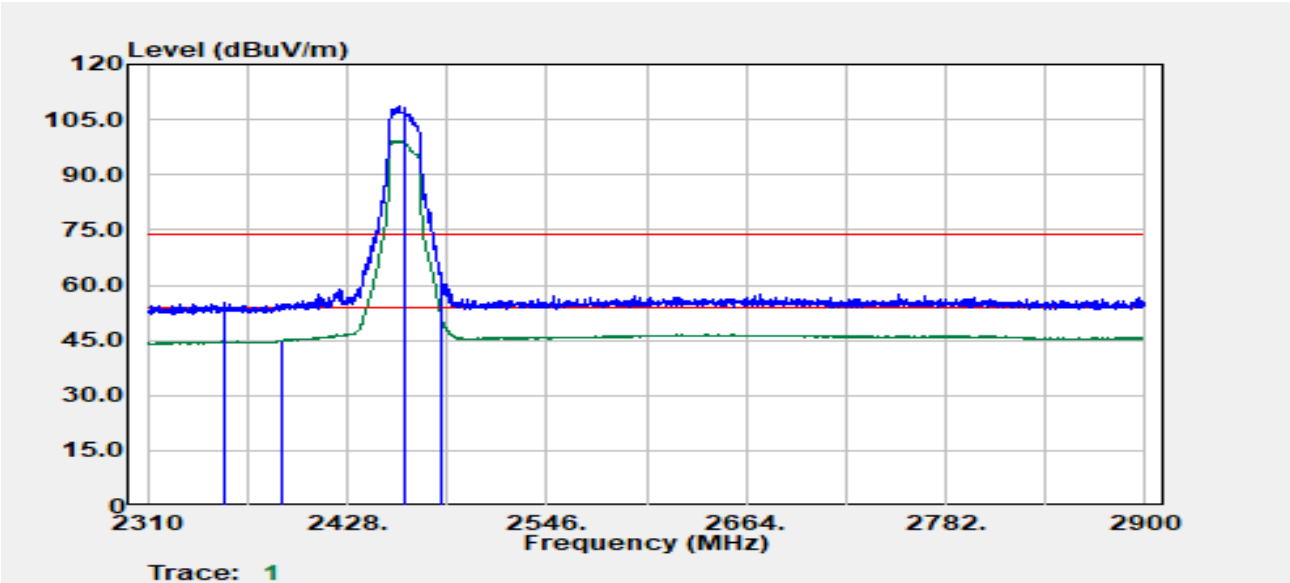
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dBμV	Factor dB	Actual FS dBUV/m	Limit dBUV/m	Margin dB
2389.90	Peak	58.80	6.28	65.07	74.00	-8.93
2389.90	Average	47.15	6.28	53.43	54.00	-0.57
2412.00	Peak	102.89	6.31	109.19	--	--
2412.00	Average	94.36	6.31	100.67	--	--
2485.03	Peak	49.81	6.73	56.55	74.00	-17.45
2487.77	Average	39.06	6.77	45.83	54.00	-8.17



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Project No	:TM-2405000413P	Test Date	:2024-06-28
Operation Band	:802.11n20	Temp./Humi.	:24.6/57
Frequency	:2462 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:Bandedge	Engineer	:Ray Li
EUT Pol	:H	Test Chamber	: 966A
Setting	:14.5		

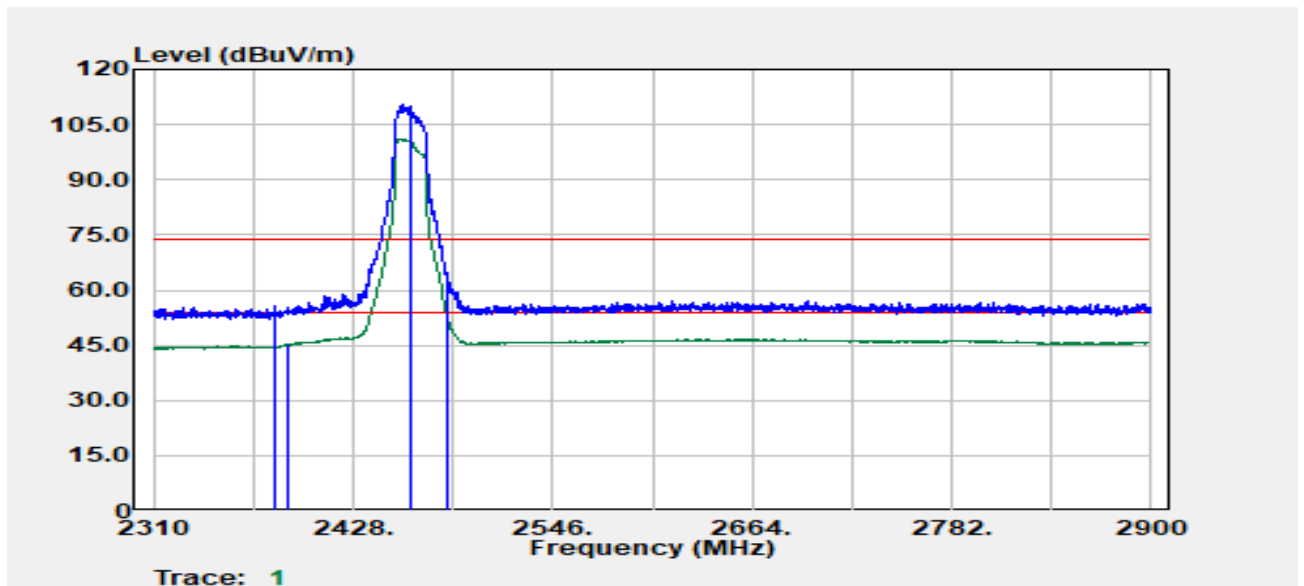


Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dBμV	Factor dB	Actual FS dBμV/m	Limit dBμV/m	Margin dB
2355.52	Peak	48.90	6.25	55.14	74.00	-18.86
2389.28	Average	38.79	6.26	45.05	54.00	-8.95
2462.00	Peak	102.14	6.32	108.46	--	--
2462.00	Average	92.83	6.32	99.15	--	--
2483.57	Average	44.82	6.72	51.53	54.00	-2.47
2484.07	Peak	54.52	6.72	61.24	74.00	-12.76

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Project No :TM-2405000413P
Operation Band :802.11n20
Frequency :2462 MHz
Operation Mode :Bandedge
EUT Pol :H
Setting :14.5

Test Date :2024-06-28
Temp./Humi. :24.6/57
Antenna Pol. :HORIZONTAL
Engineer :Ray Li
Test Chamber : 966A



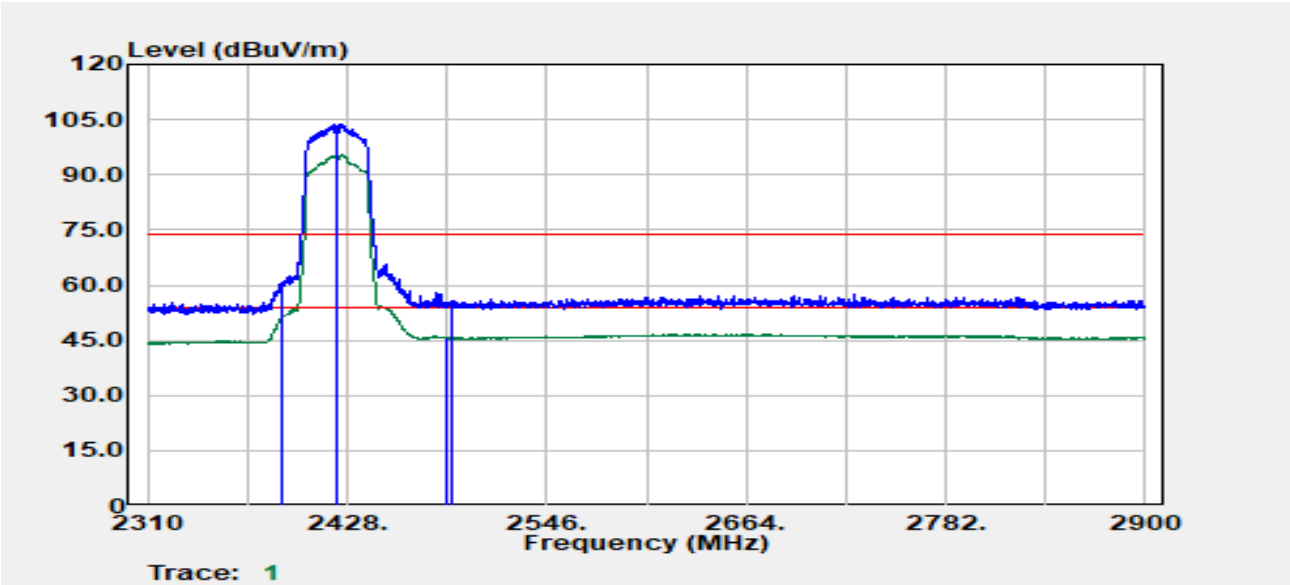
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dBμV	Factor dB	Actual FS dBUV/m	Limit dBUV/m	Margin dB
2382.28	Peak	49.52	6.12	55.63	74.00	-18.37
2390.03	Average	38.98	6.28	45.26	54.00	-8.74
2462.00	Peak	104.07	6.32	110.39	--	--
2462.00	Average	94.65	6.32	100.96	--	--
2483.50	Peak	56.29	6.71	63.00	74.00	-11.00
2483.57	Average	45.93	6.72	52.64	54.00	-1.36



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Project No	:TM-2405000413P	Test Date	:2024-06-28
Operation Band	:802.11n40	Temp./Humi.	:24.6/57
Frequency	:2422 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:Bandedge	Engineer	:Ray Li
EUT Pol	:H	Test Chamber	: 966A
Setting	:11.5		



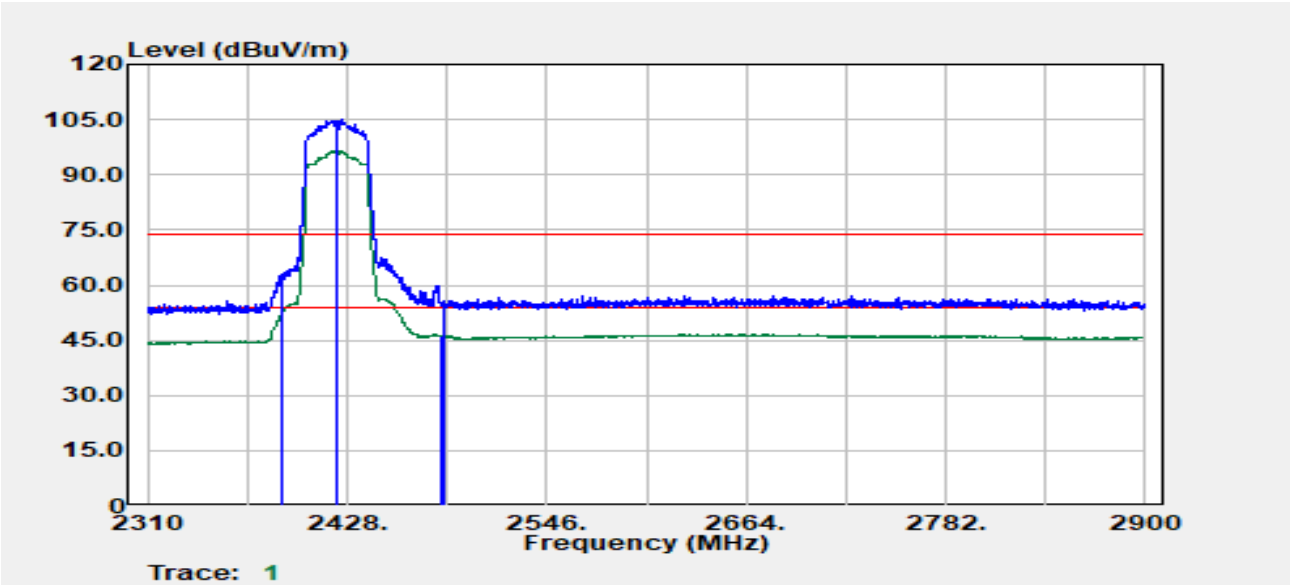
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dBμV	Factor dB	Actual FS dBμV/m	Limit dBμV/m	Margin dB
2389.53	Peak	54.51	6.27	60.78	74.00	-13.22
2389.78	Average	44.98	6.28	51.26	54.00	-2.74
2422.00	Peak	97.35	6.34	103.69	--	--
2422.00	Average	89.03	6.34	95.36	--	--
2487.08	Average	39.07	6.76	45.83	54.00	-8.17
2490.08	Peak	48.98	6.80	55.78	74.00	-18.22



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Project No	:TM-2405000413P	Test Date	:2024-06-28
Operation Band	:802.11n40	Temp./Humi.	:24.6/57
Frequency	:2422 MHz	Antenna Pol.	:HORIZONTAL
Operation Mode	:Bandedge	Engineer	:Ray Li
EUT Pol	:H	Test Chamber	: 966A
Setting	:11.5		



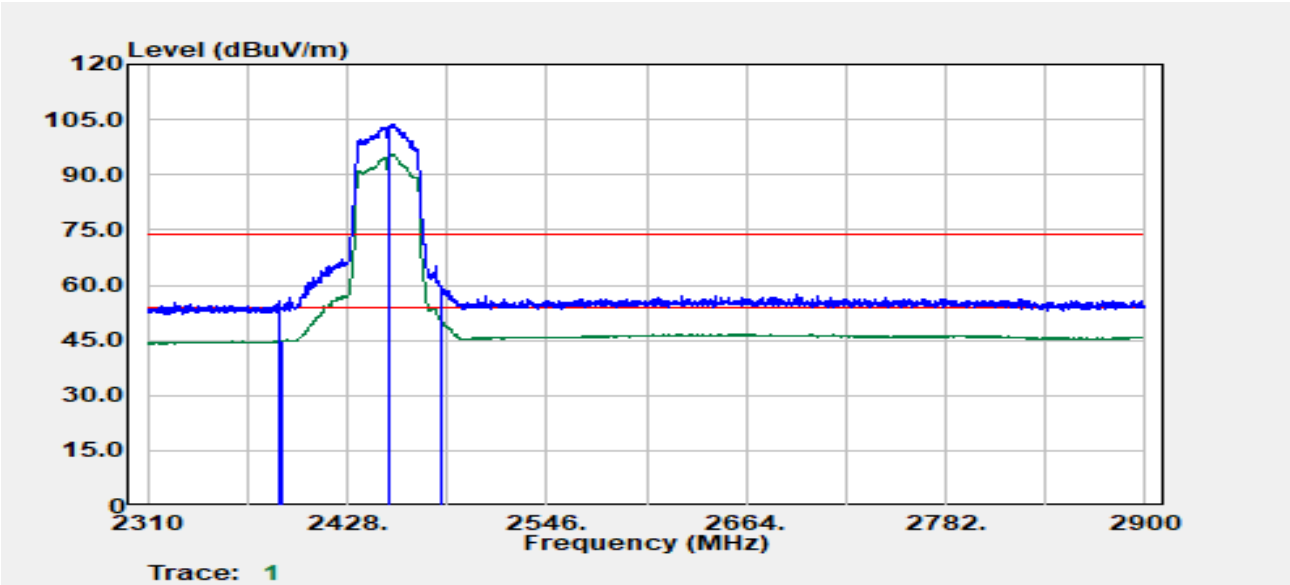
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dBμV	Factor dB	Actual FS dBUV/m	Limit dBUV/m	Margin dB
2389.78	Peak	56.57	6.28	62.84	74.00	-11.16
2390.00	Average	46.46	6.28	52.74	54.00	-1.26
2422.00	Peak	98.86	6.34	105.20	--	--
2422.00	Average	90.18	6.34	96.52	--	--
2483.57	Average	39.51	6.72	46.22	54.00	-7.78
2484.82	Peak	48.93	6.73	55.66	74.00	-18.34



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Project No	:TM-2405000413P	Test Date	:2024-06-28
Operation Band	:802.11n40	Temp./Humi.	:24.6/57
Frequency	:2452 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:Bandedge	Engineer	:Ray Li
EUT Pol	:H	Test Chamber	: 966A
Setting	:11.5		



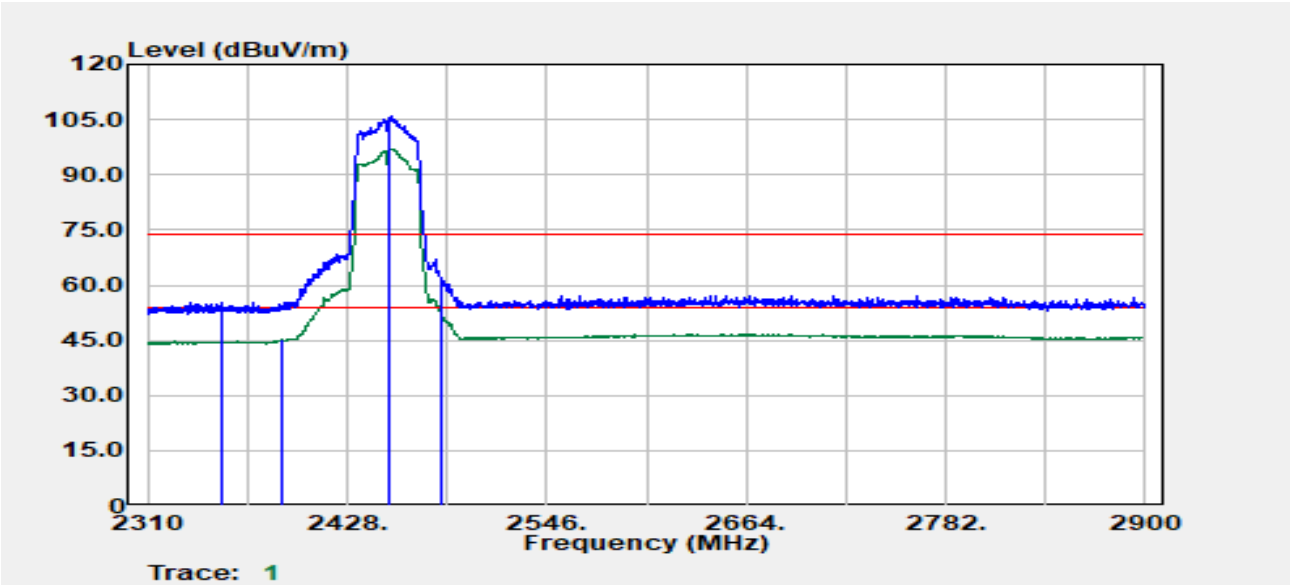
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dBμV	Factor dB	Actual FS dBUV/m	Limit dBUV/m	Margin dB
2387.28	Peak	49.33	6.22	55.55	74.00	-18.45
2390.00	Average	38.57	6.28	44.85	54.00	-9.15
2452.00	Peak	97.17	6.34	103.51	--	--
2452.00	Average	89.20	6.34	95.54	--	--
2483.57	Average	43.37	6.72	50.08	54.00	-3.92
2484.32	Peak	52.94	6.73	59.67	74.00	-14.33



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Project No	:TM-2405000413P	Test Date	:2024-06-28
Operation Band	:802.11n40	Temp./Humi.	:24.6/57
Frequency	:2452 MHz	Antenna Pol.	:HORIZONTAL
Operation Mode	:Bandedge	Engineer	:Ray Li
EUT Pol	:H	Test Chamber	: 966A
Setting	:11.5		

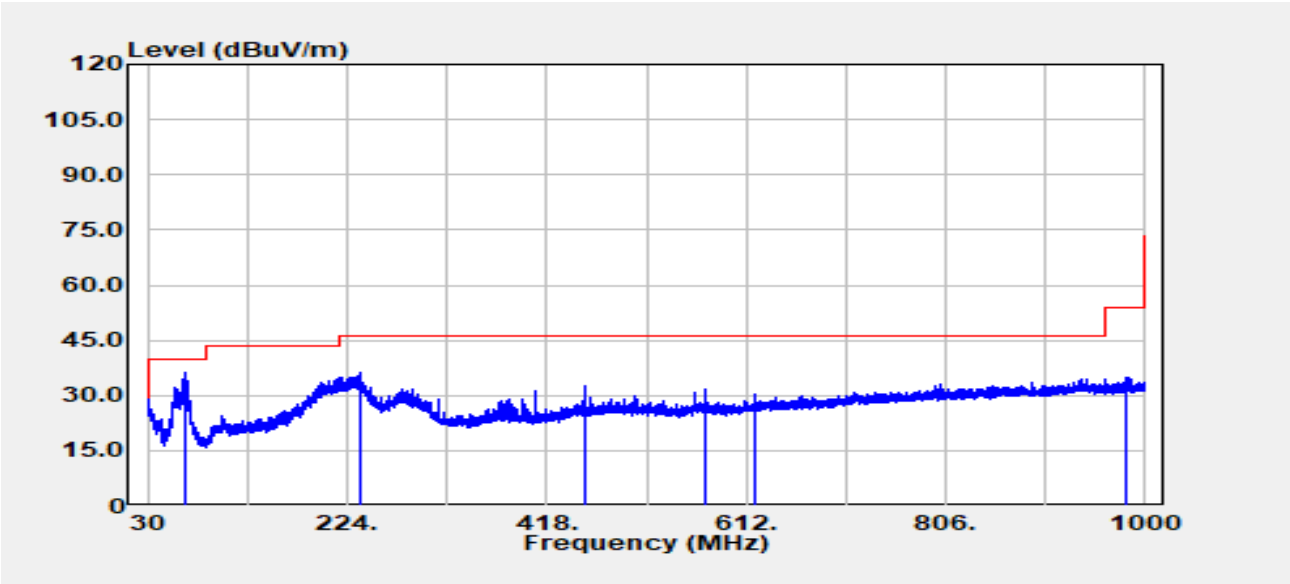


Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dBμV	Factor dB	Actual FS dBUV/m	Limit dBUV/m	Margin dB
2353.52	Peak	49.13	6.24	55.38	74.00	-18.62
2389.28	Average	38.92	6.26	45.19	54.00	-8.81
2452.00	Peak	99.43	6.34	105.77	--	--
2452.00	Average	90.71	6.34	97.06	--	--
2483.57	Peak	55.33	6.72	62.05	74.00	-11.95
2483.57	Average	45.35	6.72	52.07	54.00	-1.93



TX Test Data

Project No	:TM-2405000413P	Test Date	:2024-07-04
Operation Band	:802.11n20	Temp./Humi.	:24.6/57
Frequency	:2412 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:TX	Engineer	:Tony Chao
EUT Pol	:H	Test Chamber	: 966A
Setting	:		

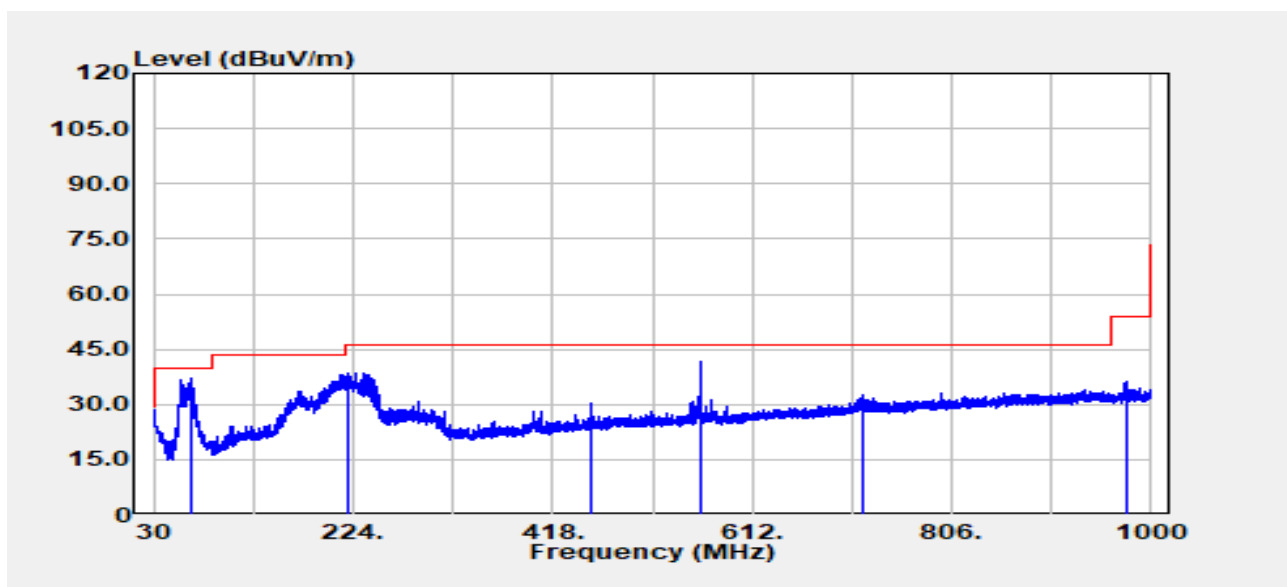


Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dBμV	Factor dB	Actual FS dBμV/m	Limit dBμV/m	Margin dB
66.01	Peak	51.57	-15.55	36.01	40.00	-3.99
237.34	Peak	47.06	-10.75	36.31	46.00	-9.69
455.95	Peak	36.83	-4.21	32.62	46.00	-13.38
571.50	Peak	33.81	-2.03	31.79	46.00	-14.21
620.97	Peak	31.72	-1.33	30.39	46.00	-15.61
982.54	Peak	30.97	3.81	34.78	54.00	-19.22

Report No.: TMWK2406002103KR

Project No :TM-2405000413P
Operation Band :802.11n20
Frequency :2412 MHz
Operation Mode :TX
EUT Pol :H
Setting :

Test Date :2024-07-04
Temp./Humi. :24.6/57
Antenna Pol. :HORIZONTAL
Engineer :Tony Chao
Test Chamber : 966A



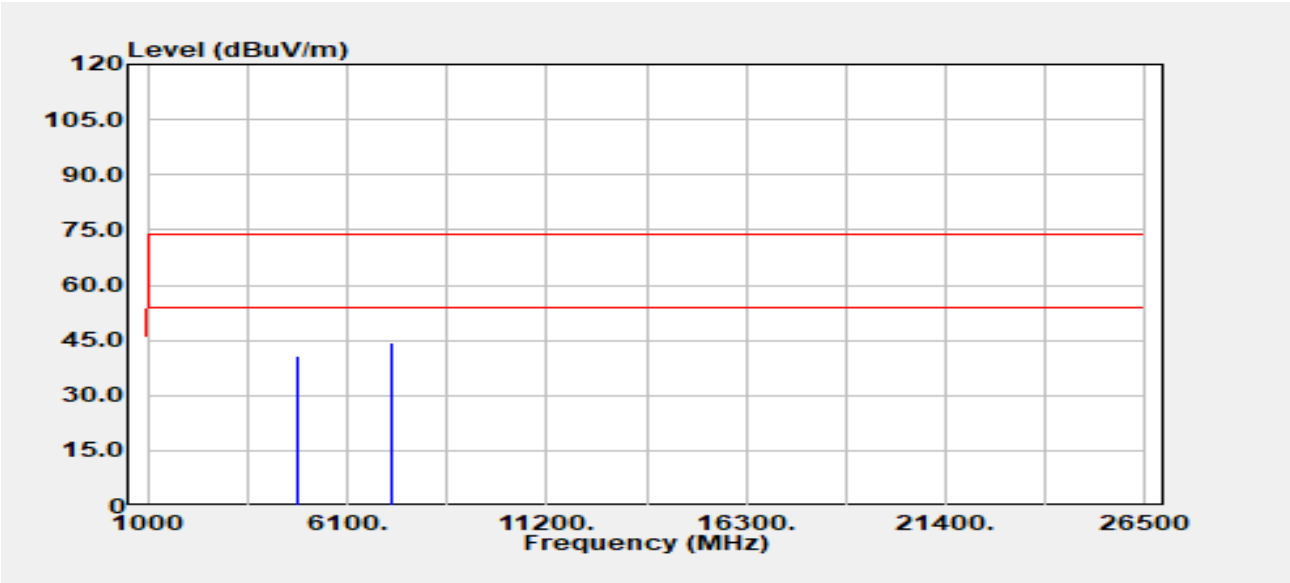
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dBμV	Factor dB	Actual FS dBUV/m	Limit dBUV/m	Margin dB
66.25	Peak	52.60	-15.48	37.12	40.00	-2.88
218.18	Peak	50.37	-11.74	38.63	46.00	-7.37
456.07	Peak	34.48	-4.21	30.27	46.00	-15.73
562.29	Peak	43.89	-2.34	41.55	46.00	-4.45
720.64	Peak	32.08	0.36	32.44	46.00	-13.56
975.02	Peak	32.70	3.63	36.33	54.00	-17.67



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Project No	:TM-2405000413P	Test Date	:2024-06-28
Operation Band	:802.11b	Temp./Humi.	:24.6/57
Frequency	:2412 MHz	Antenna Pol.	:Vertical
Operation Mode	:TX	Engineer	:Ray Li
EUT Pol	:H	Test Chamber	: 966A
Setting	:19		



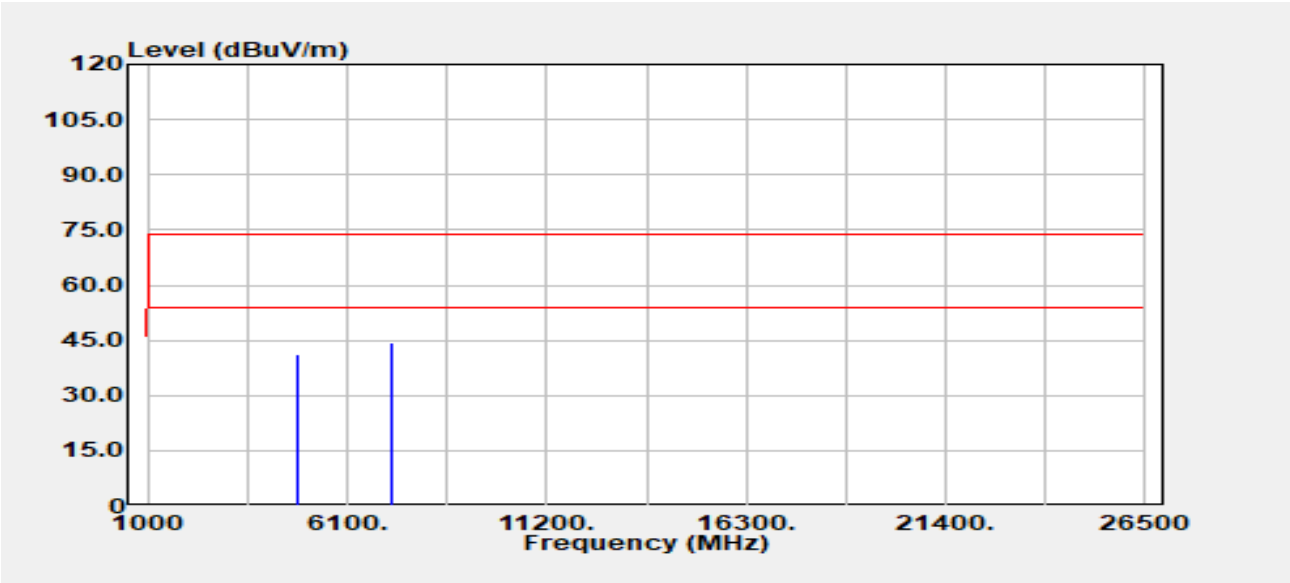
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dBμV	Factor dB	Actual FS dBμV/m	Limit dBμV/m	Margin dB
4824.00	Peak	38.56	2.25	40.81	74.00	-33.19
4824.00	Average	33.47	2.25	35.72	54.00	-18.28
7236.00	Peak	35.05	9.17	44.21	74.00	-29.79
7236.00	Average	26.00	9.17	35.17	54.00	-18.83



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Project No	:TM-2405000413P	Test Date	:2024-06-28
Operation Band	:802.11b	Temp./Humi.	:24.6/57
Frequency	:2412 MHz	Antenna Pol.	:Horizontal
Operation Mode	:TX	Engineer	:Ray Li
EUT Pol	:H	Test Chamber	: 966A
Setting	:19		



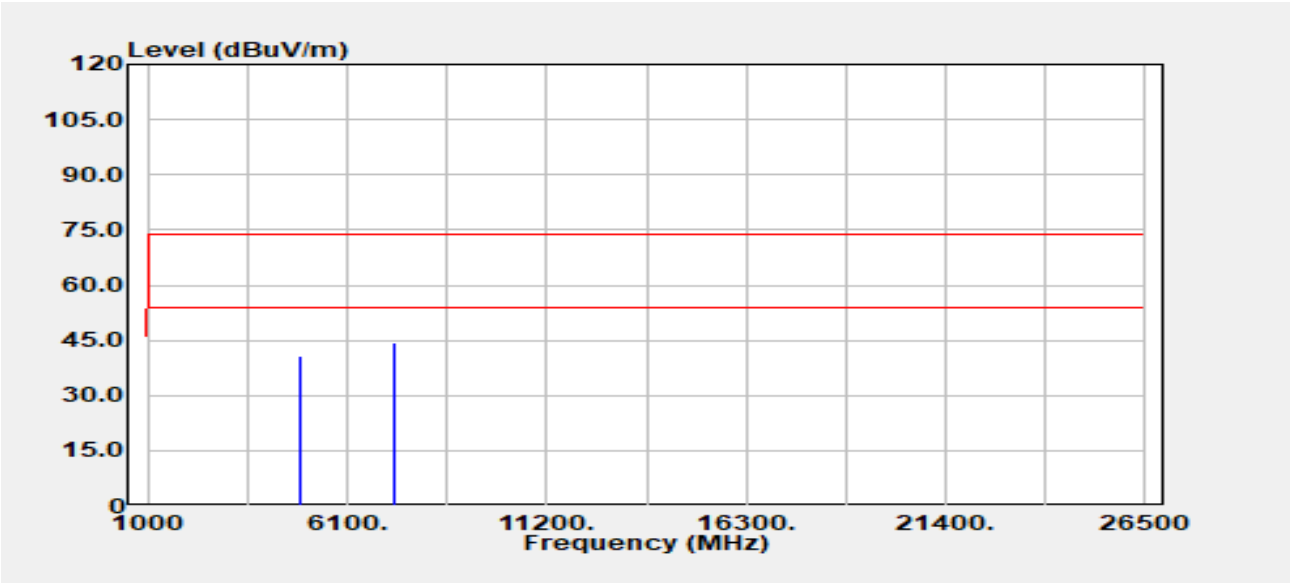
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dBμV	Factor dB	Actual FS dBμV/m	Limit dBμV/m	Margin dB
4824.00	Peak	39.06	2.25	41.31	74.00	-32.69
4824.00	Average	35.02	2.25	37.27	54.00	-16.73
7236.00	Peak	35.09	9.17	44.26	74.00	-29.74
7236.00	Average	26.07	9.17	35.24	54.00	-18.76



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Project No	:TM-2405000413P	Test Date	:2024-06-28
Operation Band	:802.11b	Temp./Humi.	:24.6/57
Frequency	:2437 MHz	Antenna Pol.	:Vertical
Operation Mode	:TX	Engineer	:Ray Li
EUT Pol	:H	Test Chamber	: 966A
Setting	:19.5		



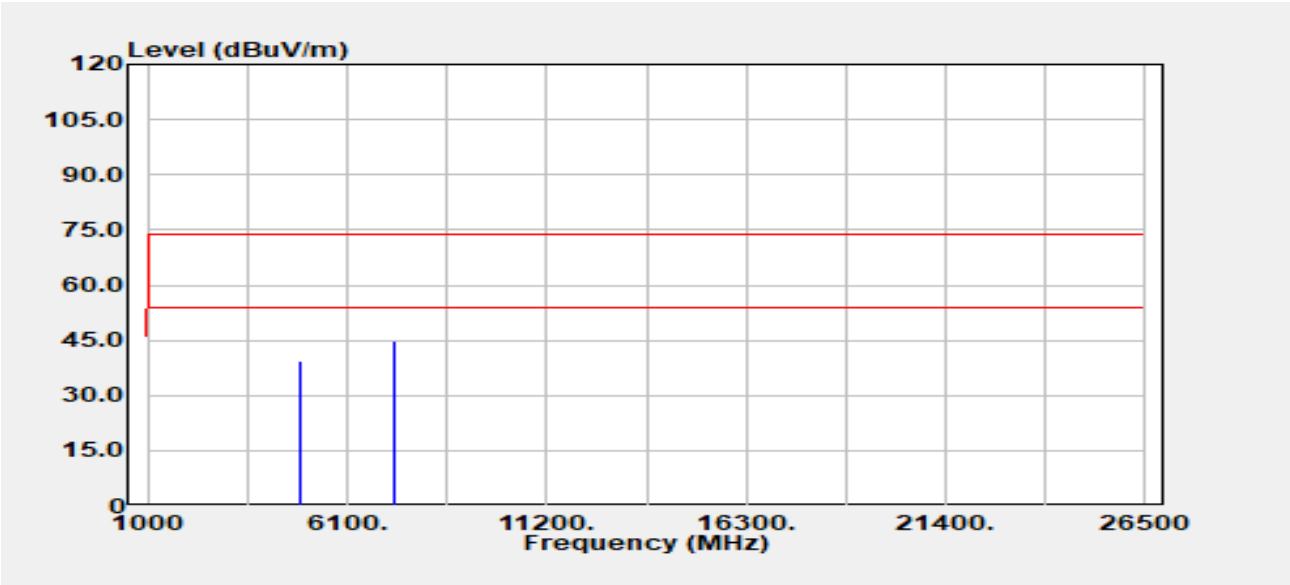
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dBμV	Factor dB	Actual FS dBUV/m	Limit dBUV/m	Margin dB
4874.00	Peak	38.39	2.49	40.88	74.00	-33.12
4874.00	Average	31.80	2.49	34.29	54.00	-19.71
7311.00	Peak	35.28	8.96	44.25	74.00	-29.75
7311.00	Average	26.74	8.96	35.70	54.00	-18.30



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Project No	:TM-2405000413P	Test Date	:2024-06-28
Operation Band	:802.11b	Temp./Humi.	:24.6/57
Frequency	:2437 MHz	Antenna Pol.	:Horizontal
Operation Mode	:TX	Engineer	:Ray Li
EUT Pol	:H	Test Chamber	: 966A
Setting	:19.5		



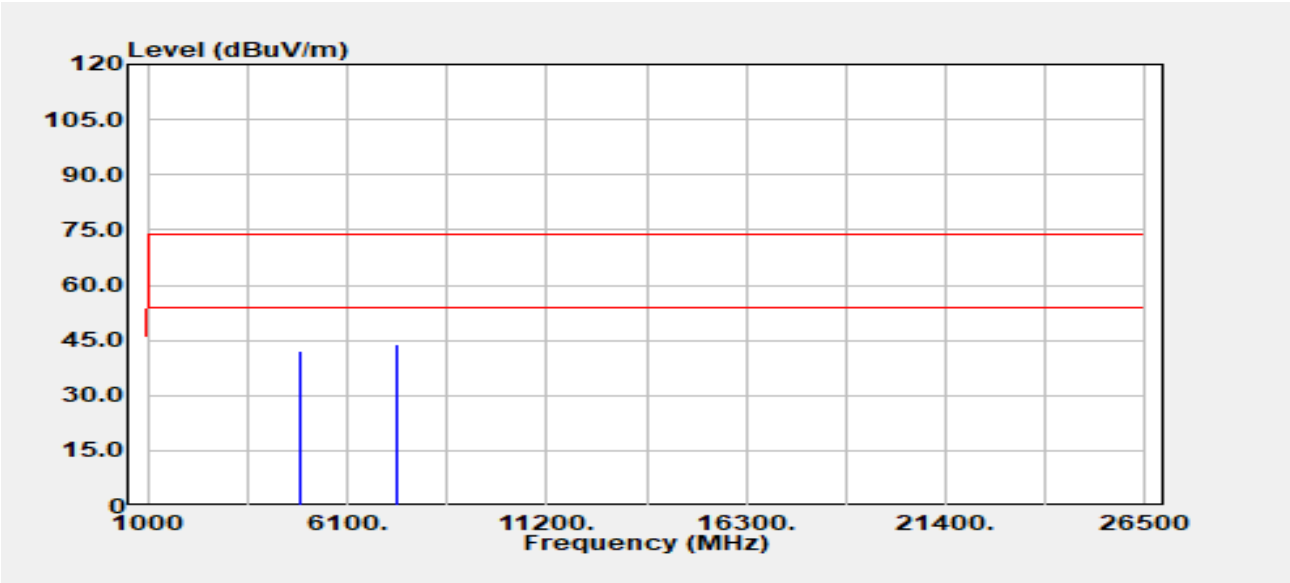
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dBμV	Factor dB	Actual FS dBμV/m	Limit dBμV/m	Margin dB
4874.00	Peak	37.06	2.49	39.55	74.00	-34.45
4874.00	Average	33.50	2.49	36.00	54.00	-18.00
7311.00	Peak	35.90	8.96	44.87	74.00	-29.13
7311.00	Average	26.44	8.96	35.40	54.00	-18.60



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Project No	:TM-2405000413P	Test Date	:2024-06-28
Operation Band	:802.11b	Temp./Humi.	:24.6/57
Frequency	:2462 MHz	Antenna Pol.	:Vertical
Operation Mode	:TX	Engineer	:Ray Li
EUT Pol	:H	Test Chamber	: 966A
Setting	:19.5		



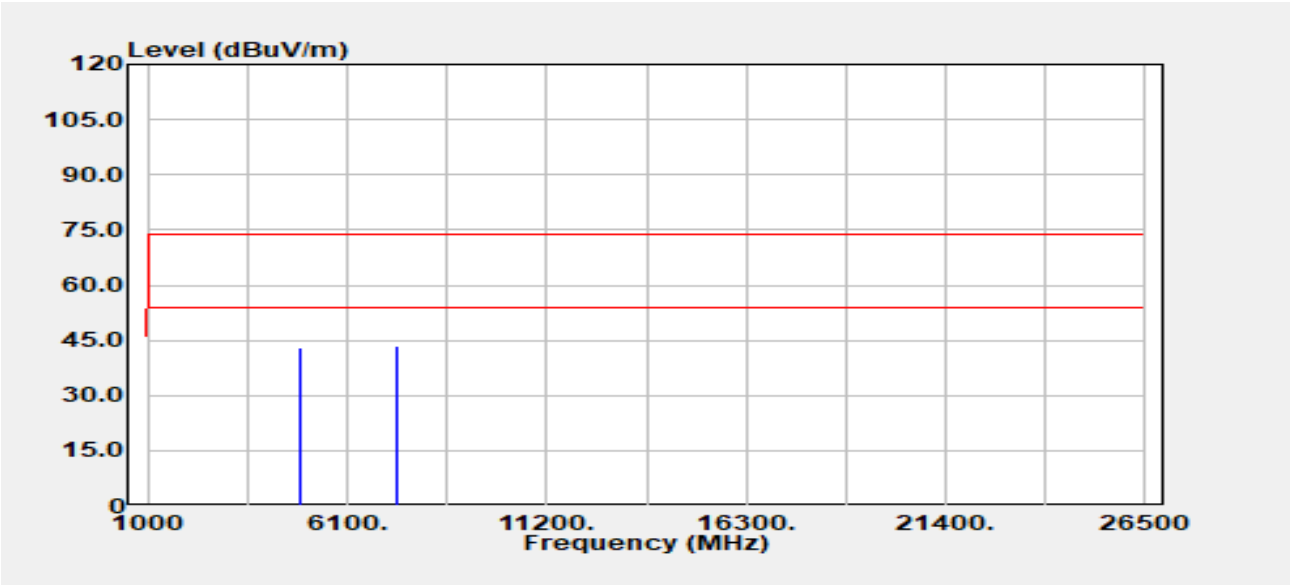
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dBμV	Factor dB	Actual FS dBUV/m	Limit dBUV/m	Margin dB
4924.00	Peak	39.21	2.93	42.13	74.00	-31.87
4924.00	Average	34.99	2.93	37.92	54.00	-16.08
7386.00	Peak	35.06	9.01	44.07	74.00	-29.93
7386.00	Average	26.80	9.01	35.81	54.00	-18.19



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Project No	:TM-2405000413P	Test Date	:2024-06-28
Operation Band	:802.11b	Temp./Humi.	:24.6/57
Frequency	:2462 MHz	Antenna Pol.	:Horizontal
Operation Mode	:TX	Engineer	:Ray Li
EUT Pol	:H	Test Chamber	: 966A
Setting	:19.5		



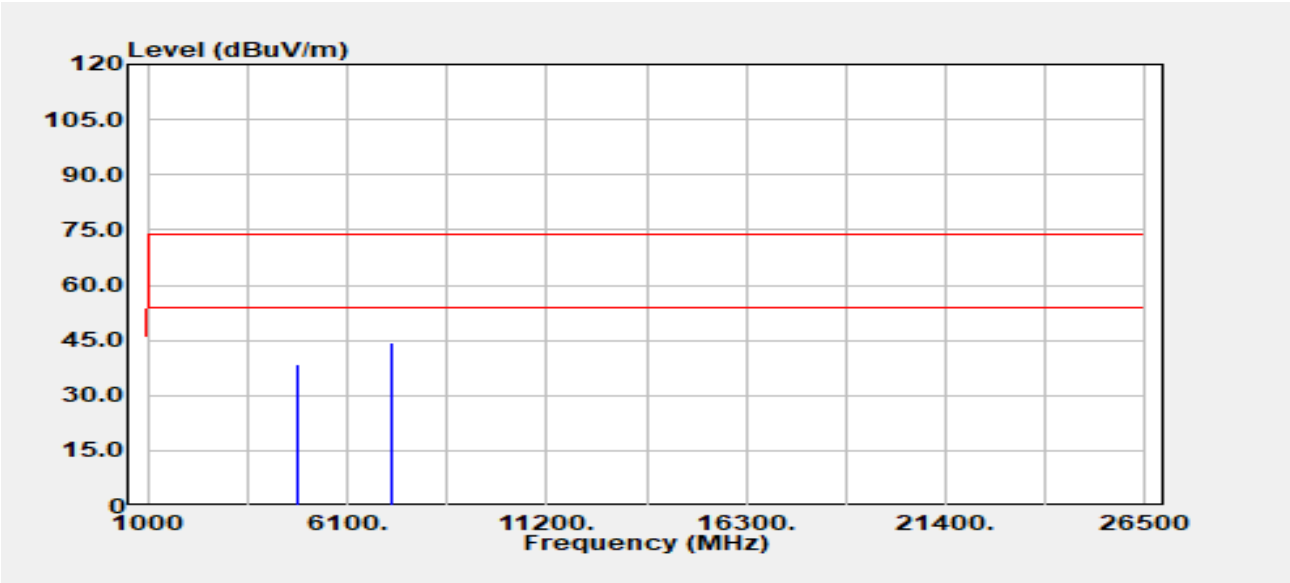
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dBμV	Factor dB	Actual FS dBμV/m	Limit dBμV/m	Margin dB
4924.00	Peak	40.32	2.93	43.24	74.00	-30.76
4924.00	Average	34.91	2.93	37.84	54.00	-16.16
7386.00	Peak	34.67	9.01	43.68	74.00	-30.32
7386.00	Average	26.14	9.01	35.15	54.00	-18.85



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Project No	:TM-2405000413P	Test Date	:2024-06-28
Operation Band	:802.11g	Temp./Humi.	:24.6/57
Frequency	:2412 MHz	Antenna Pol.	:Vertical
Operation Mode	:TX	Engineer	:Ray Li
EUT Pol	:H	Test Chamber	: 966A
Setting	:14		



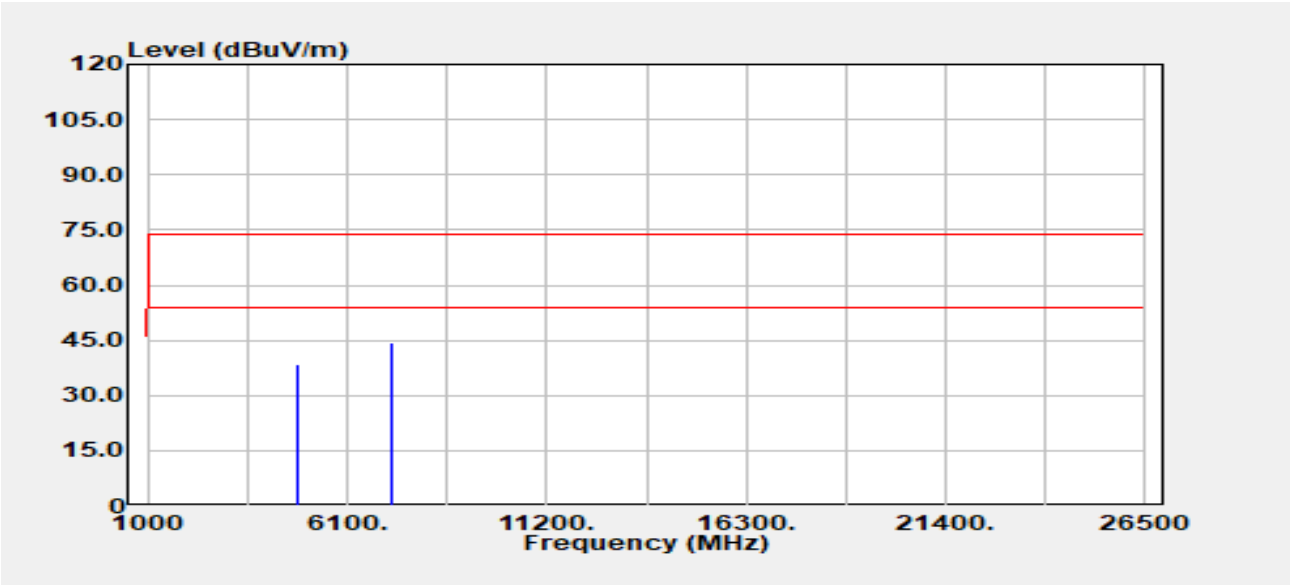
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dBμV	Factor dB	Actual FS dBμV/m	Limit dBμV/m	Margin dB
4824.00	Peak	36.22	2.25	38.47	74.00	-35.53
4824.00	Average	28.23	2.25	30.48	54.00	-23.52
7236.00	Peak	35.21	9.17	44.37	74.00	-29.63
7236.00	Average	26.53	9.17	35.70	54.00	-18.30



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Project No	:TM-2405000413P	Test Date	:2024-06-28
Operation Band	:802.11g	Temp./Humi.	:24.6/57
Frequency	:2412 MHz	Antenna Pol.	:Horizontal
Operation Mode	:TX	Engineer	:Ray Li
EUT Pol	:H	Test Chamber	: 966A
Setting	:14		



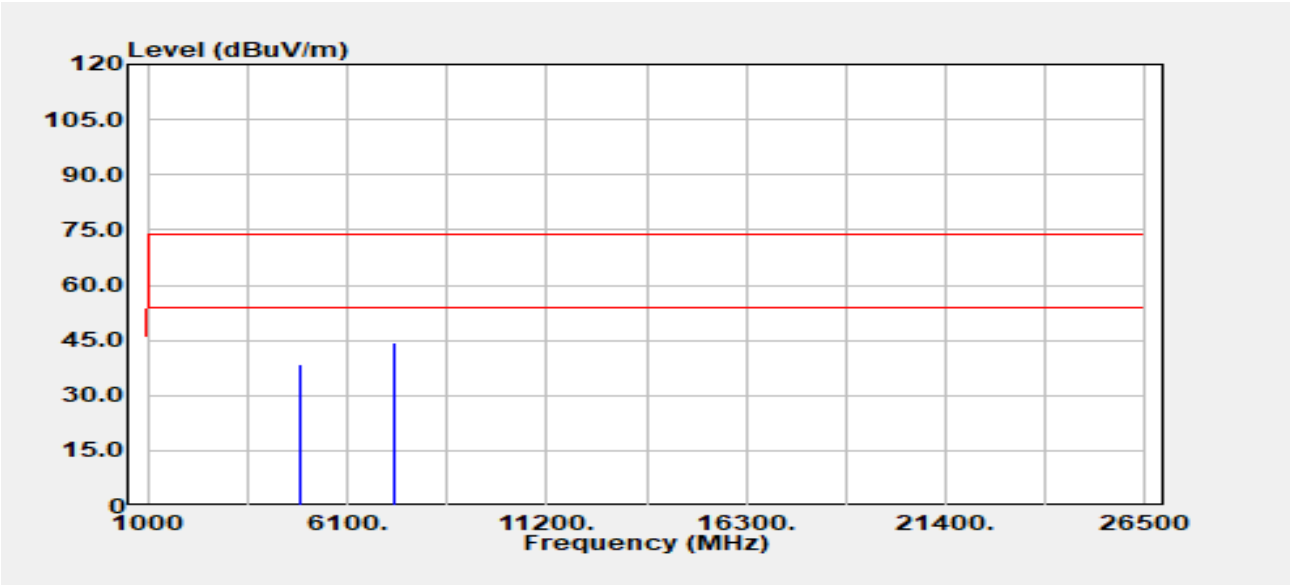
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dBμV	Factor dB	Actual FS dBμV/m	Limit dBμV/m	Margin dB
4824.00	Peak	36.11	2.25	38.37	74.00	-35.63
4824.00	Average	28.33	2.25	30.58	54.00	-23.42
7236.00	Peak	35.32	9.17	44.49	74.00	-29.51
7236.00	Average	26.40	9.17	35.57	54.00	-18.43



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Project No	:TM-2405000413P	Test Date	:2024-06-28
Operation Band	:802.11g	Temp./Humi.	:24.6/57
Frequency	:2437 MHz	Antenna Pol.	:Vertical
Operation Mode	:TX	Engineer	:Ray Li
EUT Pol	:H	Test Chamber	: 966A
Setting	:19		



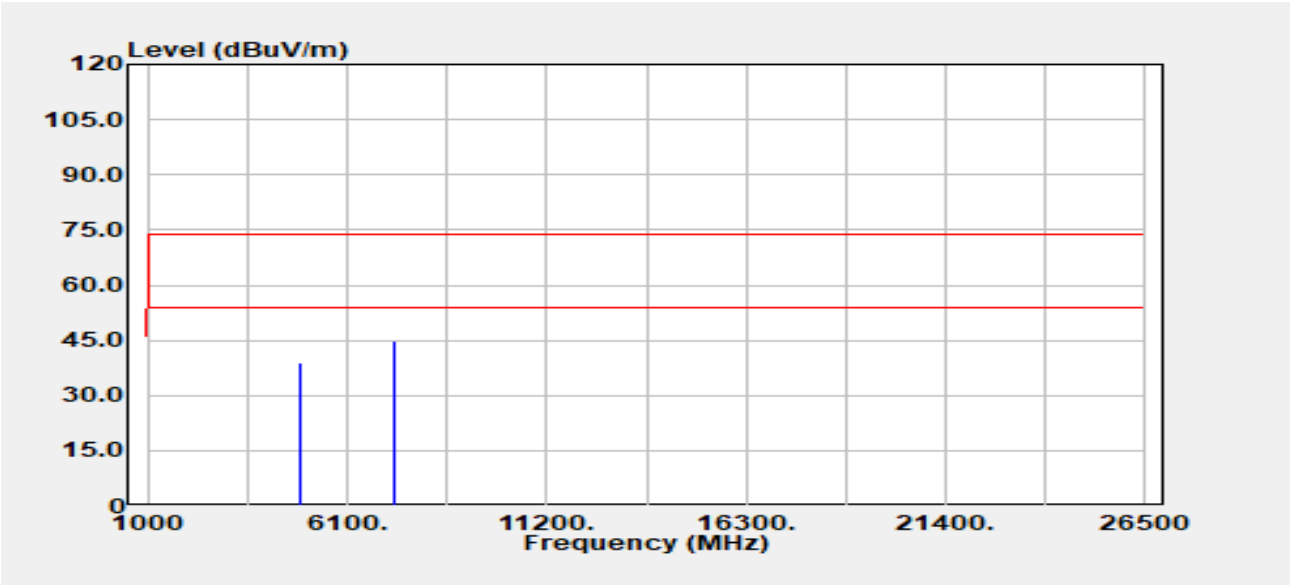
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dBμV	Factor dB	Actual FS dBμV/m	Limit dBμV/m	Margin dB
4874.00	Peak	35.83	2.49	38.32	74.00	-35.68
4874.00	Average	27.78	2.49	30.28	54.00	-23.72
7311.00	Peak	35.62	8.96	44.59	74.00	-29.41
7311.00	Average	26.52	8.96	35.48	54.00	-18.52



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Project No	:TM-2405000413P	Test Date	:2024-06-28
Operation Band	:802.11g	Temp./Humi.	:24.6/57
Frequency	:2437 MHz	Antenna Pol.	:Horizontal
Operation Mode	:TX	Engineer	:Ray Li
EUT Pol	:H	Test Chamber	: 966A
Setting	:19		



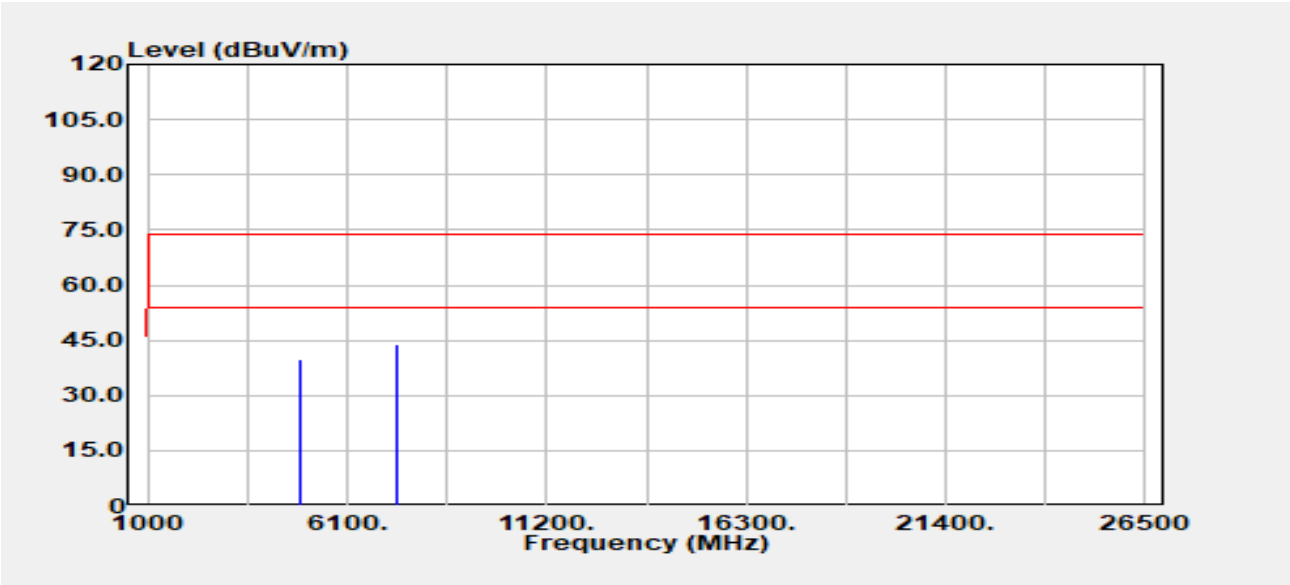
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dBμV	Factor dB	Actual FS dBμV/m	Limit dBμV/m	Margin dB
4874.00	Peak	36.65	2.49	39.15	74.00	-34.85
4874.00	Average	27.62	2.49	30.12	54.00	-23.88
7311.00	Peak	35.86	8.96	44.82	74.00	-29.18
7311.00	Average	26.42	8.96	35.38	54.00	-18.62



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Project No	:TM-2405000413P	Test Date	:2024-06-28
Operation Band	:802.11g	Temp./Humi.	:24.6/57
Frequency	:2462 MHz	Antenna Pol.	:Vertical
Operation Mode	:TX	Engineer	:Ray Li
EUT Pol	:H	Test Chamber	: 966A
Setting	:15.5		



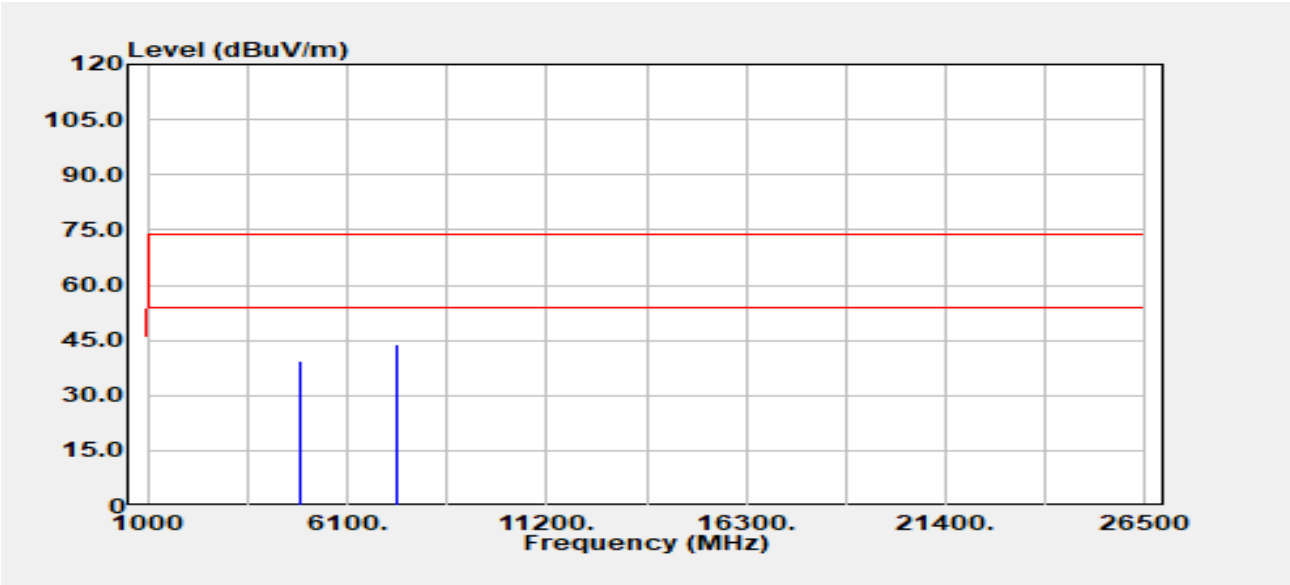
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dBμV	Factor dB	Actual FS dBμV/m	Limit dBμV/m	Margin dB
4924.00	Peak	36.96	2.93	39.88	74.00	-34.12
4924.00	Average	27.60	2.93	30.53	54.00	-23.47
7386.00	Peak	34.93	9.01	43.94	74.00	-30.06
7386.00	Average	26.12	9.01	35.14	54.00	-18.86



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Project No	:TM-2405000413P	Test Date	:2024-06-28
Operation Band	:802.11g	Temp./Humi.	:24.6/57
Frequency	:2462 MHz	Antenna Pol.	:Horizontal
Operation Mode	:TX	Engineer	:Ray Li
EUT Pol	:H	Test Chamber	: 966A
Setting	:15.5		



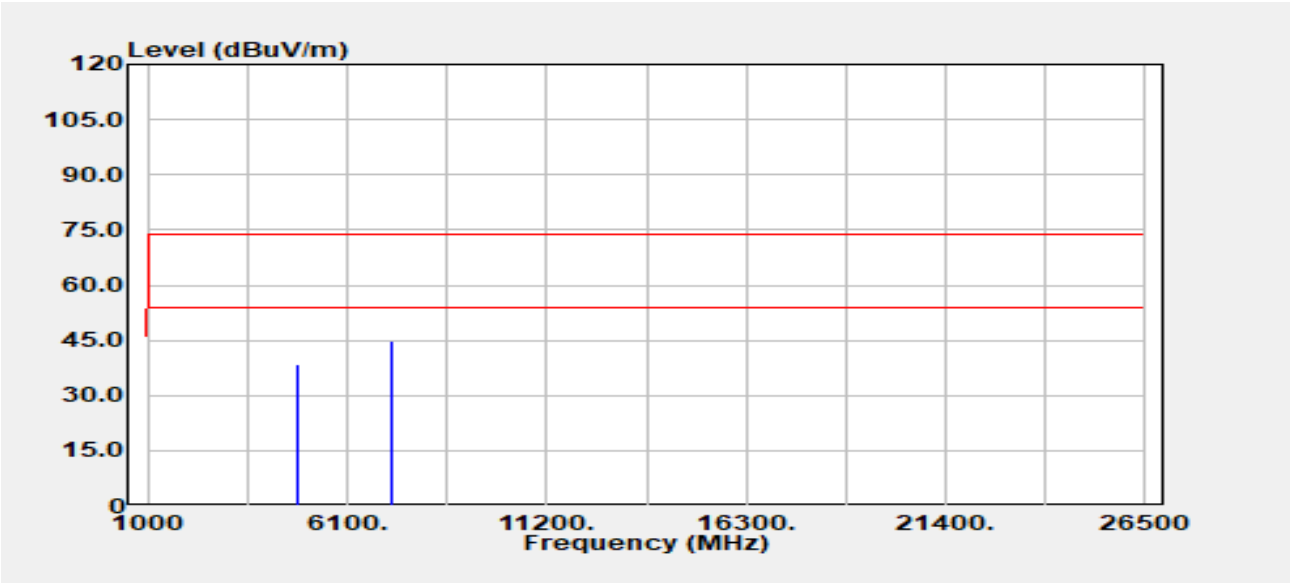
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dBμV	Factor dB	Actual FS dBμV/m	Limit dBμV/m	Margin dB
4924.00	Peak	36.65	2.93	39.58	74.00	-34.42
4924.00	Average	27.78	2.93	30.70	54.00	-23.30
7386.00	Peak	35.08	9.01	44.09	74.00	-29.91
7386.00	Average	26.17	9.01	35.19	54.00	-18.81



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Project No	:TM-2405000413P	Test Date	:2024-06-28
Operation Band	:802.11n20	Temp./Humi.	:24.6/57
Frequency	:2412 MHz	Antenna Pol.	:Vertical
Operation Mode	:TX	Engineer	:Ray Li
EUT Pol	:H	Test Chamber	: 966A
Setting	:13.5		



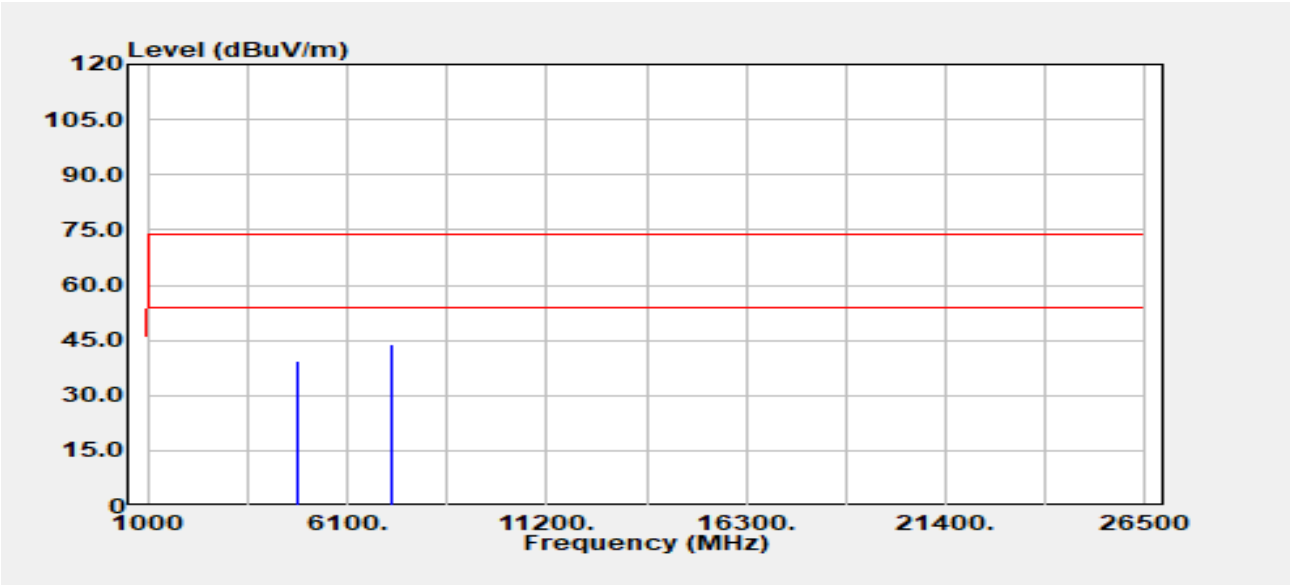
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dBμV	Factor dB	Actual FS dBμV/m	Limit dBμV/m	Margin dB
4824.00	Peak	36.44	2.25	38.69	74.00	-35.31
4824.00	Average	28.20	2.25	30.45	54.00	-23.55
7236.00	Peak	35.49	9.17	44.66	74.00	-29.34
7236.00	Average	26.37	9.17	35.53	54.00	-18.47



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Project No	:TM-2405000413P	Test Date	:2024-06-28
Operation Band	:802.11n20	Temp./Humi.	:24.6/57
Frequency	:2412 MHz	Antenna Pol.	:Horizontal
Operation Mode	:TX	Engineer	:Ray Li
EUT Pol	:H	Test Chamber	: 966A
Setting	:13.5		



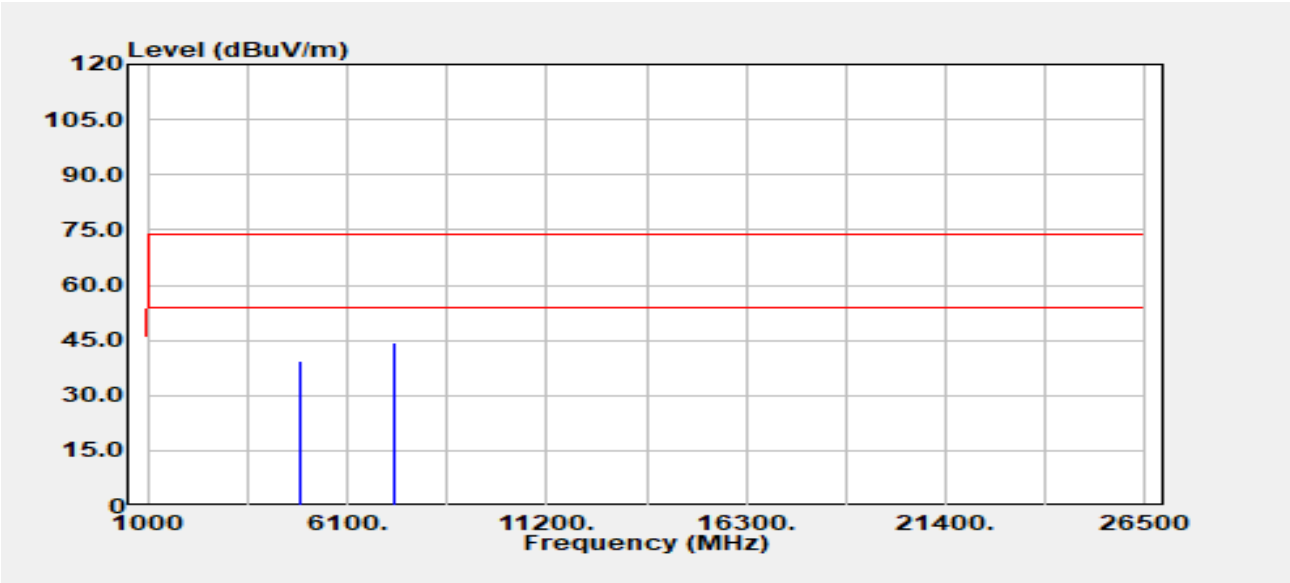
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dBμV	Factor dB	Actual FS dBμV/m	Limit dBμV/m	Margin dB
4824.00	Peak	37.32	2.25	39.58	74.00	-34.42
4824.00	Average	28.21	2.25	30.46	54.00	-23.54
7236.00	Peak	34.71	9.17	43.88	74.00	-30.12
7236.00	Average	26.38	9.17	35.54	54.00	-18.46



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Project No	:TM-2405000413P	Test Date	:2024-06-28
Operation Band	:802.11n20	Temp./Humi.	:24.6/57
Frequency	:2437 MHz	Antenna Pol.	:Vertical
Operation Mode	:TX	Engineer	:Ray Li
EUT Pol	:H	Test Chamber	: 966A
Setting	:19		



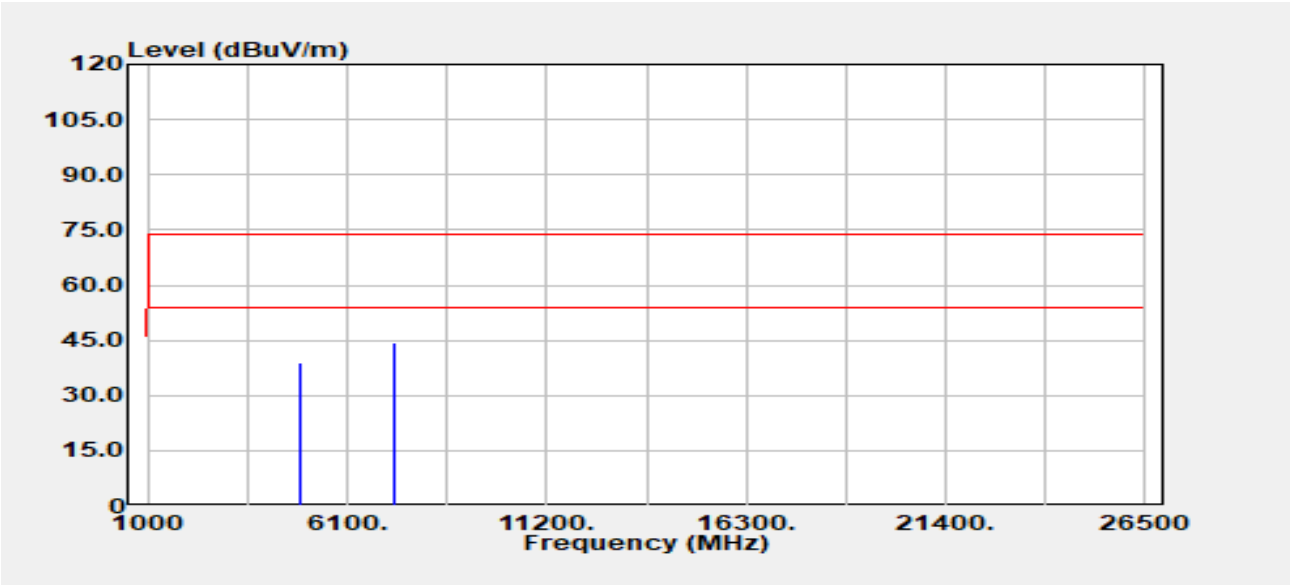
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dBμV	Factor dB	Actual FS dBμV/m	Limit dBμV/m	Margin dB
4874.00	Peak	37.07	2.49	39.57	74.00	-34.43
4874.00	Average	27.73	2.49	30.22	54.00	-23.78
7311.00	Peak	35.32	8.96	44.28	74.00	-29.72
7311.00	Average	26.40	8.96	35.37	54.00	-18.63



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Project No	:TM-2405000413P	Test Date	:2024-06-28
Operation Band	:802.11n20	Temp./Humi.	:24.6/57
Frequency	:2437 MHz	Antenna Pol.	:Horizontal
Operation Mode	:TX	Engineer	:Ray Li
EUT Pol	:H	Test Chamber	: 966A
Setting	:19		



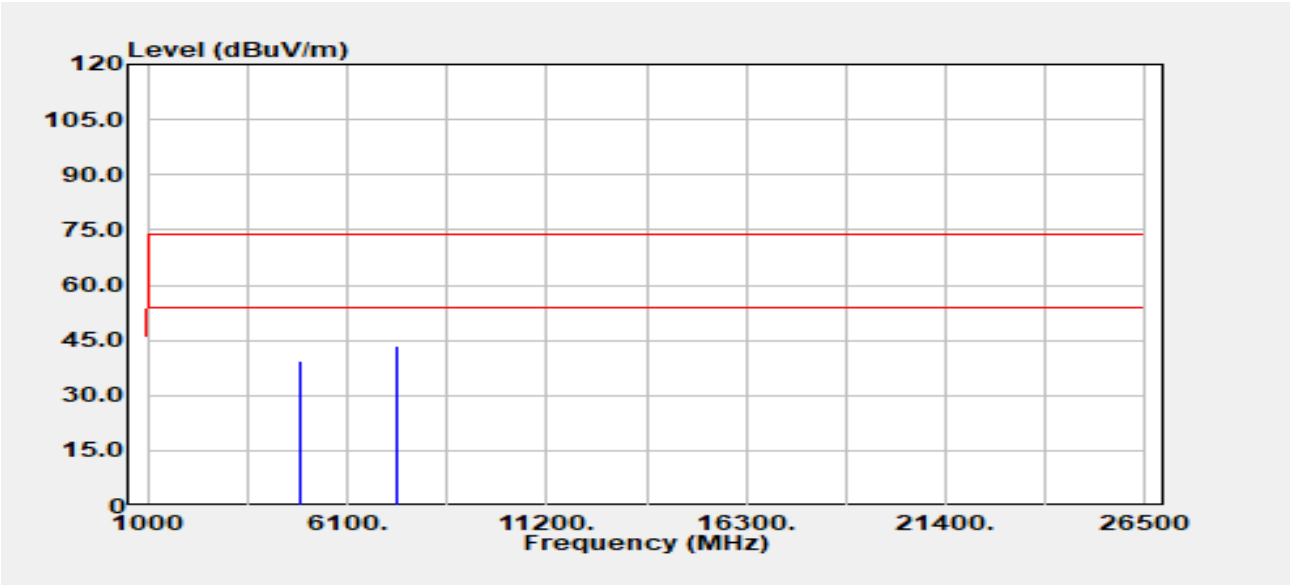
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dBμV	Factor dB	Actual FS dBμV/m	Limit dBμV/m	Margin dB
4874.00	Peak	36.23	2.49	38.72	74.00	-35.28
4874.00	Average	27.92	2.49	30.42	54.00	-23.58
7311.00	Peak	35.63	8.96	44.59	74.00	-29.41
7311.00	Average	26.44	8.96	35.41	54.00	-18.59



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Project No	:TM-2405000413P	Test Date	:2024-06-28
Operation Band	:802.11n20	Temp./Humi.	:24.6/57
Frequency	:2462 MHz	Antenna Pol.	:Vertical
Operation Mode	:TX	Engineer	:Ray Li
EUT Pol	:H	Test Chamber	: 966A
Setting	:14.5		



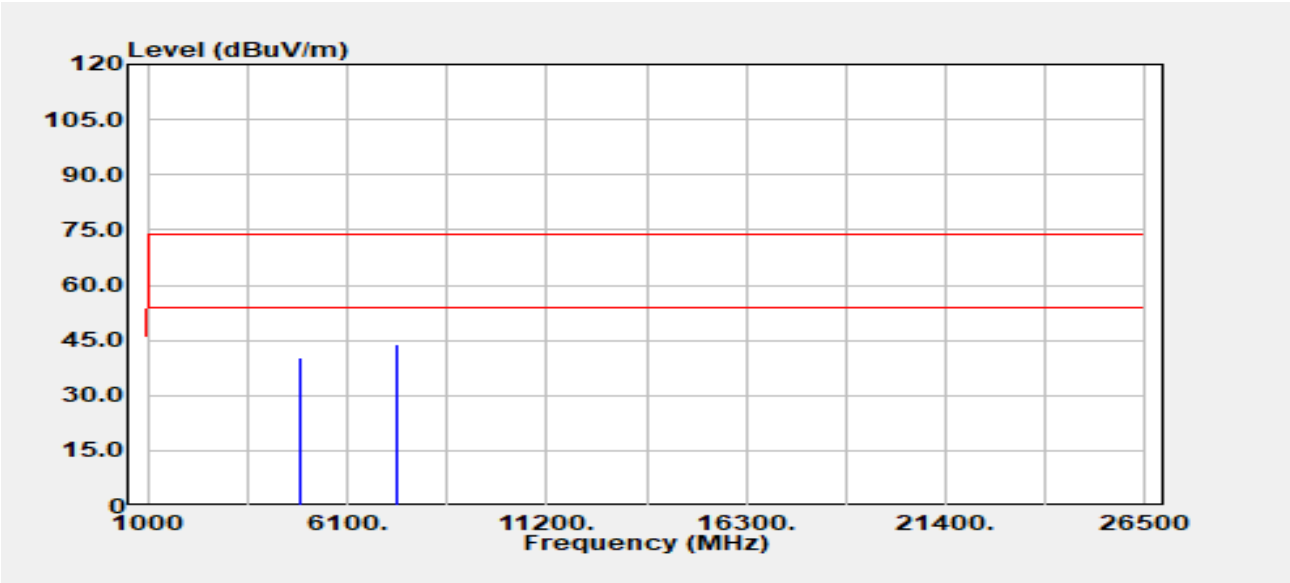
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dBμV	Factor dB	Actual FS dBμV/m	Limit dBμV/m	Margin dB
4924.00	Peak	36.58	2.93	39.51	74.00	-34.49
4924.00	Average	27.57	2.93	30.50	54.00	-23.50
7386.00	Peak	34.27	9.01	43.29	74.00	-30.71
7386.00	Average	26.12	9.01	35.13	54.00	-18.87



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Project No	:TM-2405000413P	Test Date	:2024-06-28
Operation Band	:802.11n20	Temp./Humi.	:24.6/57
Frequency	:2462 MHz	Antenna Pol.	:Horizontal
Operation Mode	:TX	Engineer	:Ray Li
EUT Pol	:H	Test Chamber	: 966A
Setting	:14.5		



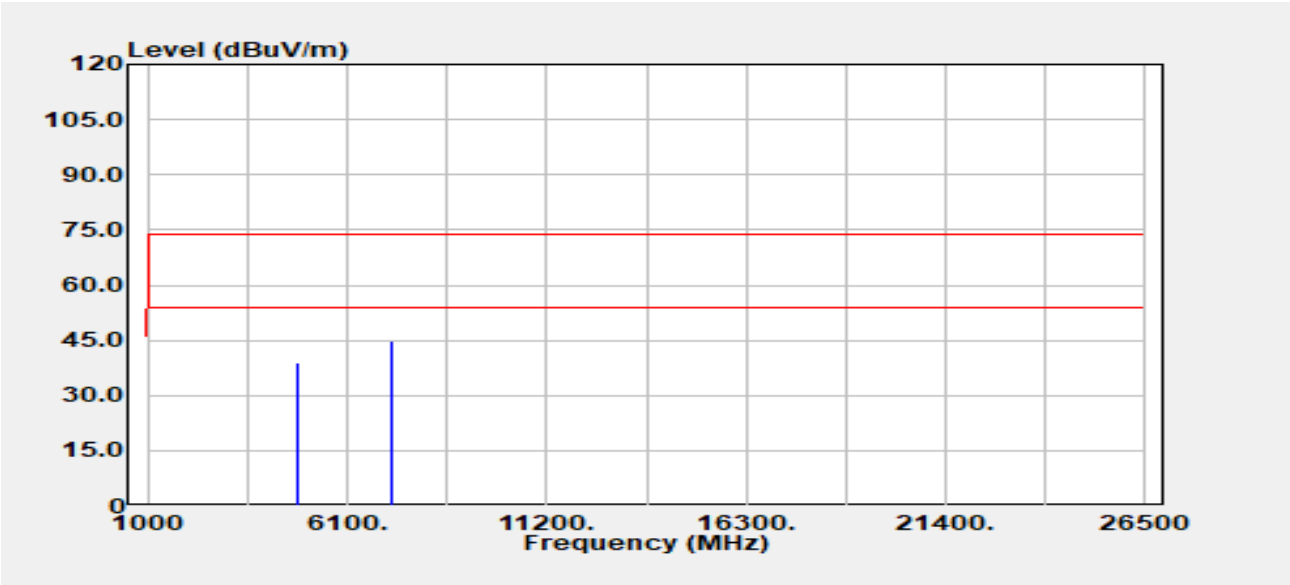
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dBμV	Factor dB	Actual FS dBμV/m	Limit dBμV/m	Margin dB
4924.00	Peak	37.41	2.93	40.34	74.00	-33.66
4924.00	Average	27.52	2.93	30.45	54.00	-23.55
7386.00	Peak	34.74	9.01	43.75	74.00	-30.25
7386.00	Average	26.24	9.01	35.25	54.00	-18.75



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Project No	:TM-2405000413P	Test Date	:2024-06-28
Operation Band	:802.11n40	Temp./Humi.	:24.6/57
Frequency	:2422 MHz	Antenna Pol.	:Vertical
Operation Mode	:TX	Engineer	:Ray Li
EUT Pol	:H	Test Chamber	: 966A
Setting	:11.5		



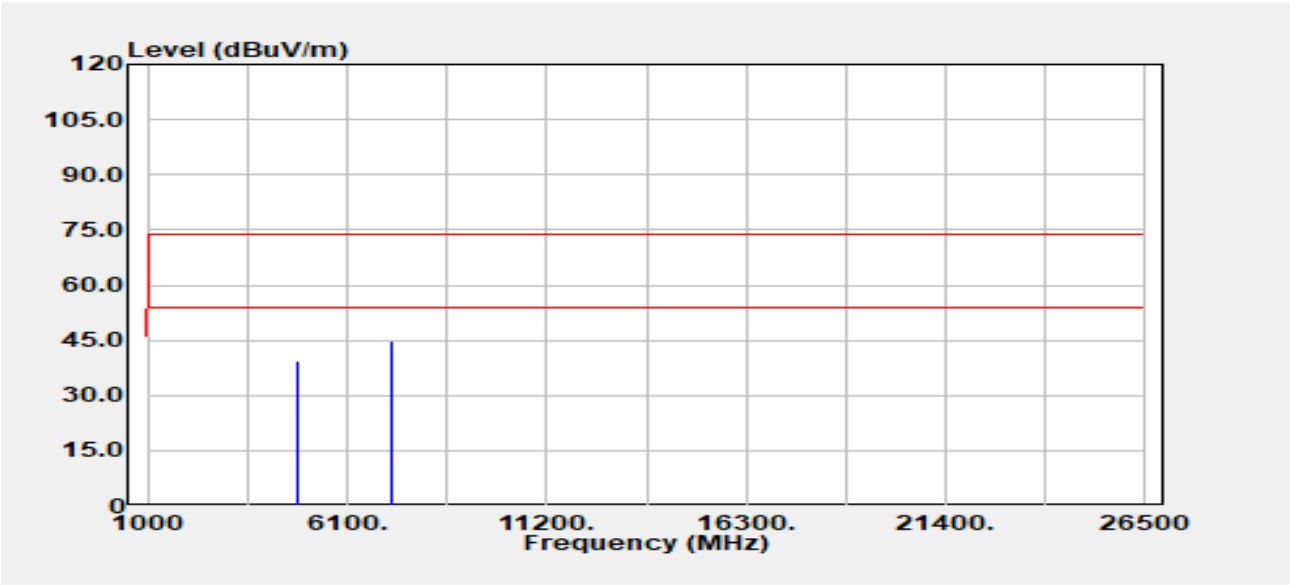
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dBμV	Factor dB	Actual FS dBUV/m	Limit dBUV/m	Margin dB
4844.00	Peak	36.89	2.28	39.17	74.00	-34.83
4844.00	Average	28.06	2.28	30.33	54.00	-23.67
7266.00	Peak	35.51	9.15	44.66	74.00	-29.34
7266.00	Average	26.47	9.15	35.62	54.00	-18.38



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Project No	:TM-2405000413P	Test Date	:2024-06-28
Operation Band	:802.11n40	Temp./Humi.	:24.6/57
Frequency	:2422 MHz	Antenna Pol.	:Horizontal
Operation Mode	:TX	Engineer	:Ray Li
EUT Pol	:H	Test Chamber	: 966A
Setting	:11.5		



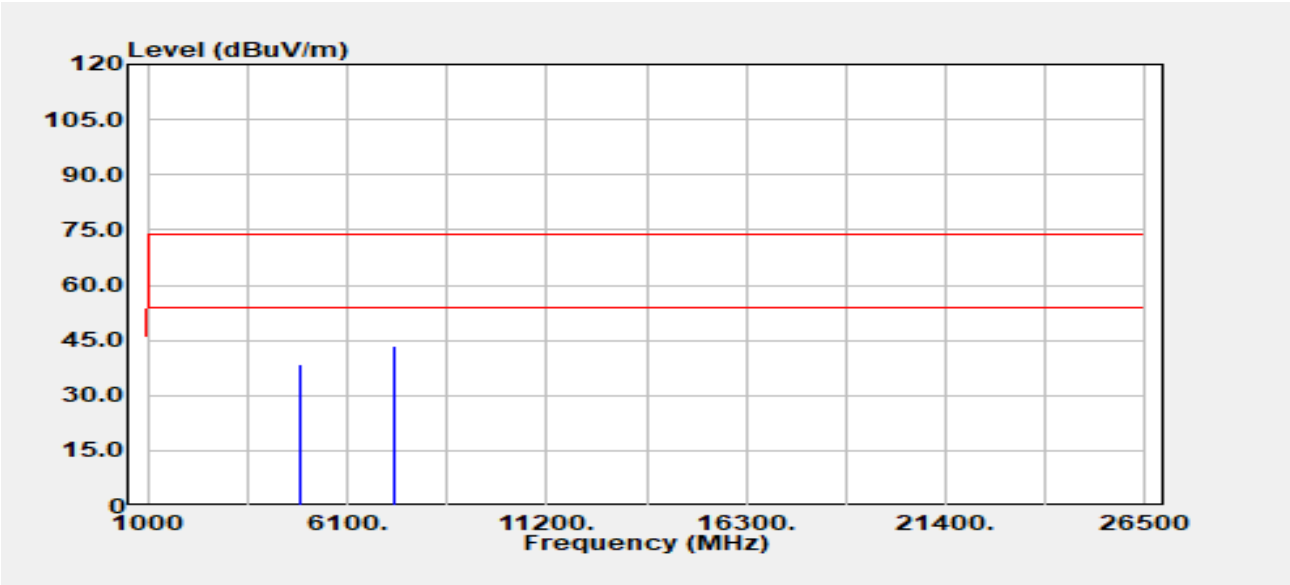
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dBμV	Factor dB	Actual FS dBμV/m	Limit dBμV/m	Margin dB
4844.00	Peak	37.15	2.28	39.43	74.00	-34.57
4844.00	Average	28.05	2.28	30.33	54.00	-23.67
7266.00	Peak	35.62	9.15	44.77	74.00	-29.23
7266.00	Average	26.44	9.15	35.59	54.00	-18.41



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Project No	:TM-2405000413P	Test Date	:2024-06-28
Operation Band	:802.11n40	Temp./Humi.	:24.6/57
Frequency	:2437 MHz	Antenna Pol.	:Vertical
Operation Mode	:TX	Engineer	:Ray Li
EUT Pol	:H	Test Chamber	: 966A
Setting	:17		



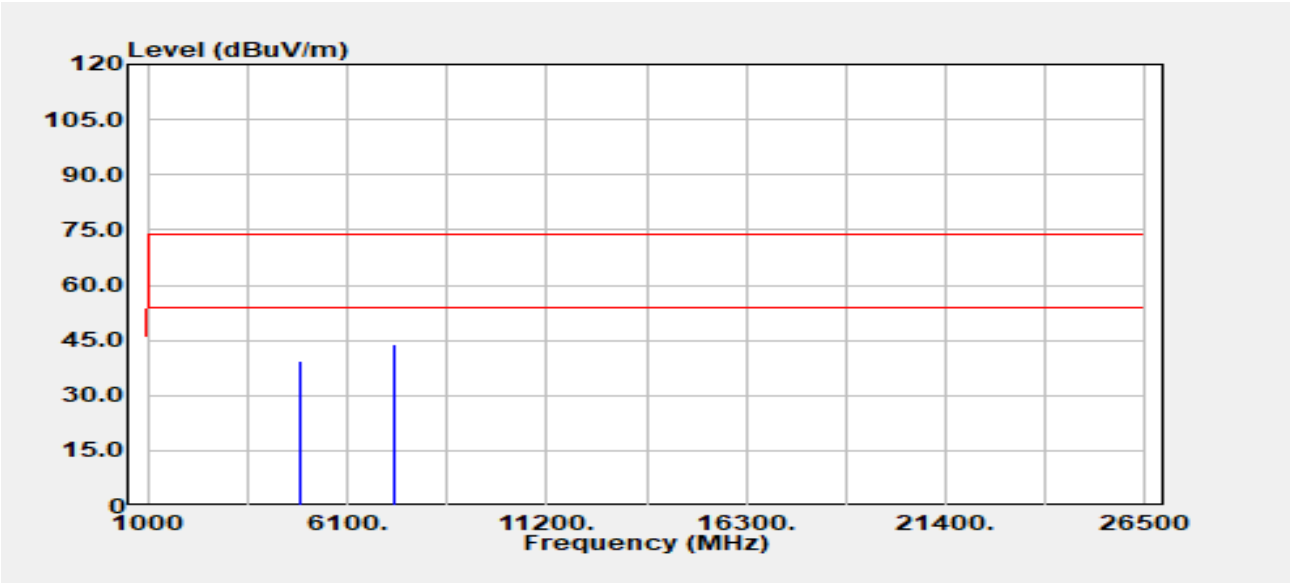
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dBμV	Factor dB	Actual FS dBμV/m	Limit dBμV/m	Margin dB
4874.00	Peak	36.19	2.49	38.68	74.00	-35.32
4874.00	Average	27.55	2.49	30.04	54.00	-23.96
7311.00	Peak	34.68	8.96	43.64	74.00	-30.36
7311.00	Average	26.58	8.96	35.55	54.00	-18.45



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Project No	:TM-2405000413P	Test Date	:2024-06-28
Operation Band	:802.11n40	Temp./Humi.	:24.6/57
Frequency	:2437 MHz	Antenna Pol.	:Horizontal
Operation Mode	:TX	Engineer	:Ray Li
EUT Pol	:H	Test Chamber	: 966A
Setting	:17		



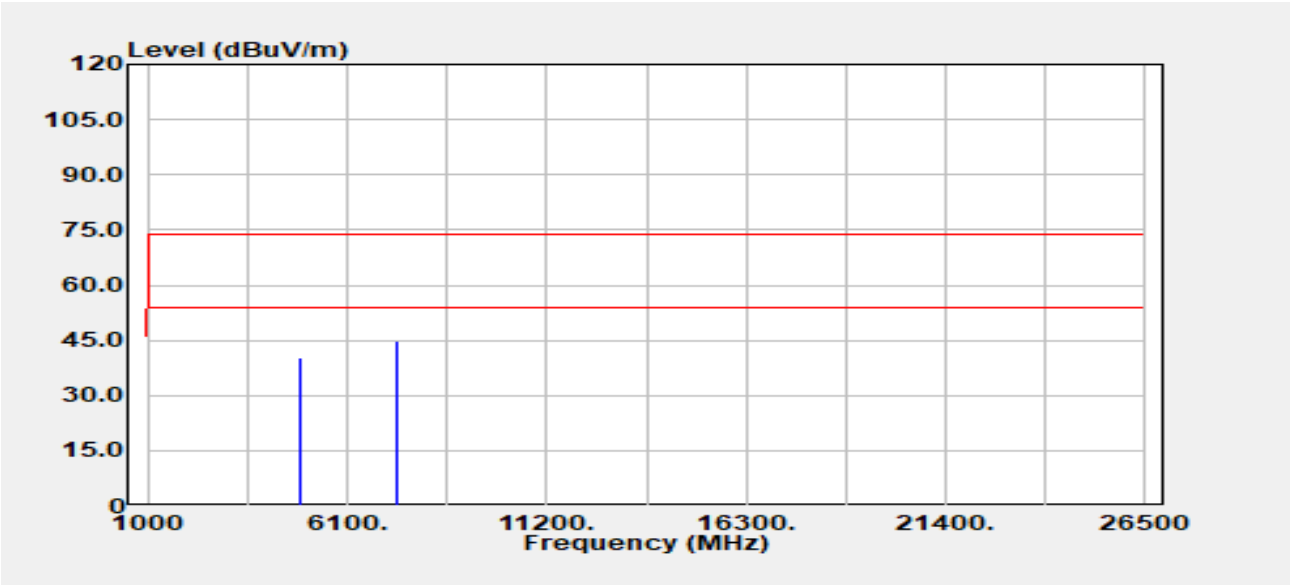
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dBμV	Factor dB	Actual FS dBμV/m	Limit dBμV/m	Margin dB
4874.00	Peak	36.84	2.49	39.33	74.00	-34.67
4874.00	Average	27.56	2.49	30.05	54.00	-23.95
7311.00	Peak	35.19	8.96	44.15	74.00	-29.85
7311.00	Average	26.47	8.96	35.44	54.00	-18.56



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Project No	:TM-2405000413P	Test Date	:2024-06-28
Operation Band	:802.11n40	Temp./Humi.	:24.6/57
Frequency	:2452 MHz	Antenna Pol.	:Vertical
Operation Mode	:TX	Engineer	:Ray Li
EUT Pol	:H	Test Chamber	: 966A
Setting	:11.5		



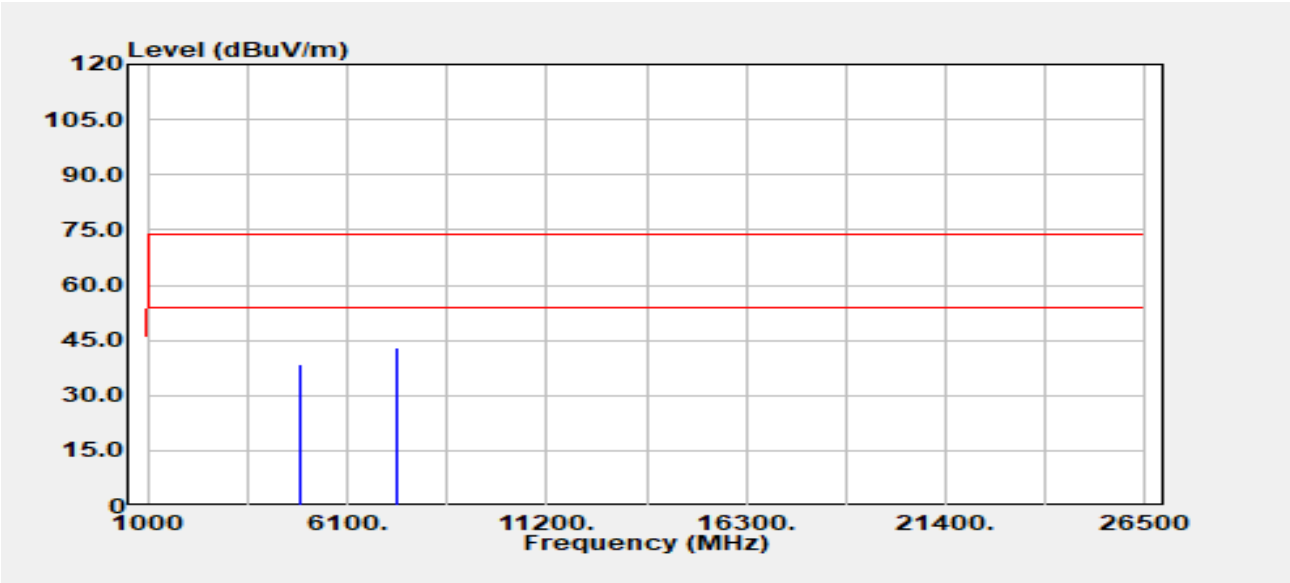
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dBμV	Factor dB	Actual FS dBμV/m	Limit dBμV/m	Margin dB
4904.00	Peak	37.47	2.75	40.23	74.00	-33.77
4904.00	Average	27.29	2.75	30.04	54.00	-23.96
7356.00	Peak	35.94	8.95	44.89	74.00	-29.11
7356.00	Average	26.51	8.95	35.46	54.00	-18.54



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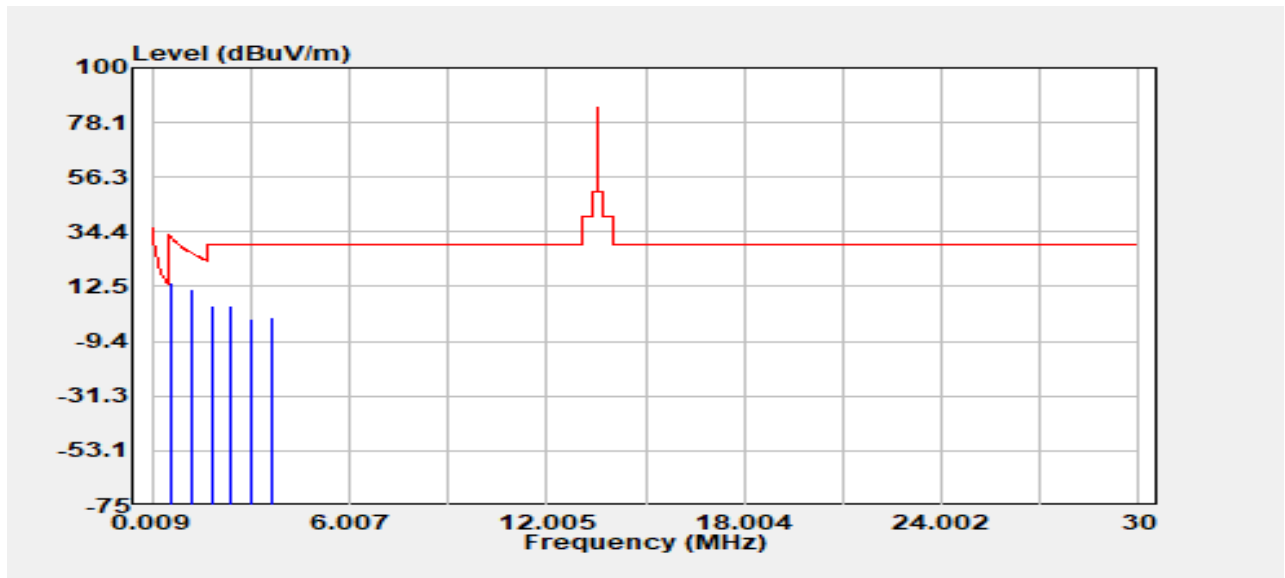
Project No	:TM-2405000413P	Test Date	:2024-06-28
Operation Band	:802.11n40	Temp./Humi.	:24.6/57
Frequency	:2452 MHz	Antenna Pol.	:Horizontal
Operation Mode	:TX	Engineer	:Ray Li
EUT Pol	:H	Test Chamber	: 966A
Setting	:11.5		



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dBμV	Factor dB	Actual FS dBUV/m	Limit dBUV/m	Margin dB
4904.00	Peak	35.94	2.75	38.69	74.00	-35.31
4904.00	Average	27.05	2.75	29.80	54.00	-24.20
7356.00	Peak	33.94	8.95	42.89	74.00	-31.11
7356.00	Average	26.56	8.95	35.51	54.00	-18.49

Co-location

Project No	:TM-2405000413P	Test Date	:2024-07-05
Operation Band	:NFC_802.11n40_LTE Band2 QPSK1,0 20M	Temp./Humi.	:24.6/57
Frequency	:13.56 MHz_2437 MHz_1871 MHz	Antenna Pol.	:HORIZONTAL
Operation Mode	:TX	Engineer	:Ray Li
EUT Pol	:H	Test Chamber	: 966A
Setting	:		

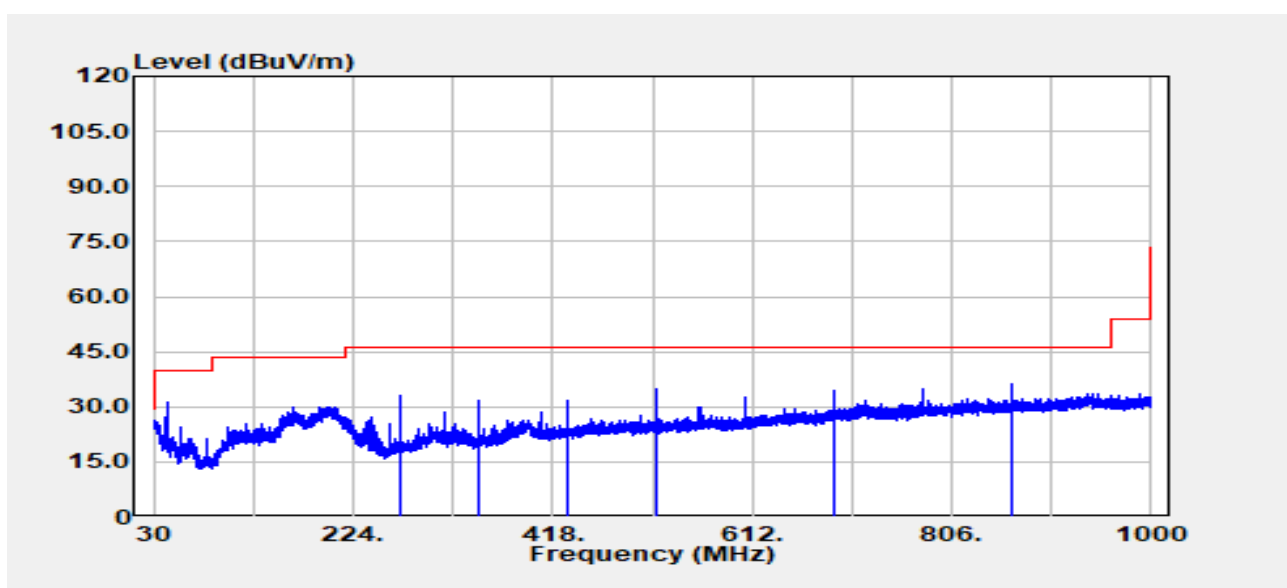


Freq. MHz	Detector Mode	Spectrum Read Level @3m dBμV	Factor @3m dB	Actual FS @3m dBμV/m	Factor @30m&300m dB	Actual FS @30m&300m dBμV/m	Limit dBμV/m	Margin dB
0.60	Peak	34.81	19.53	54.34	-40.00	14.34	31.99	-17.65
1.21	Peak	31.72	19.63	51.36	-40.00	11.36	25.97	-14.62
1.81	Peak	25.12	19.64	44.76	-40.00	4.76	29.54	-24.78
2.41	Peak	25.13	19.65	44.78	-40.00	4.78	29.54	-24.76
3.01	Peak	20.15	19.66	39.80	-40.00	-0.20	29.54	-29.74
3.62	Peak	20.68	19.75	40.43	-40.00	0.43	29.54	-29.11

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.: TMWK2406002103KR

Project No	:TM-2405000413P	Test Date	:2024-07-05
Operation Band	:NFC_802.11n40_LTE Band2 QPSK1,0 20M	Temp./Humi.	:24.6/57
Frequency	:13.56 MHz_2437 MHz_1871 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:TX	Engineer	:Ray Li
EUT Pol	:H	Test Chamber	: 966A
Setting	:		

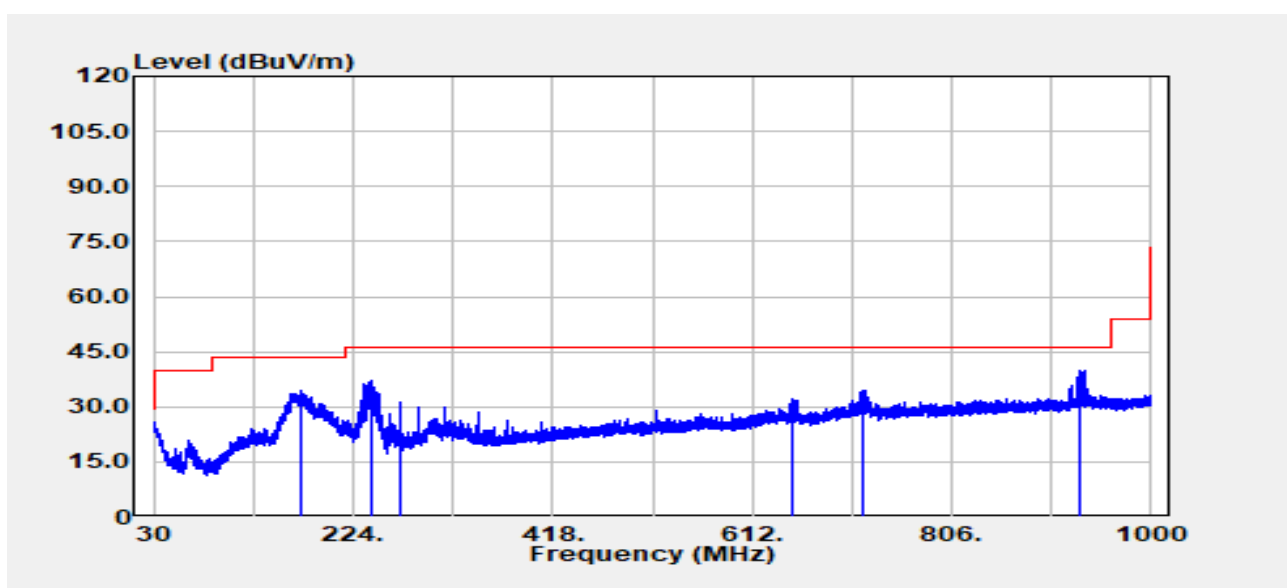


Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dBμV	Factor dB	Actual FS dBUV/m	Limit dBUV/m	Margin dB
270.00	Peak	42.06	-9.02	33.04	46.00	-12.96
345.60	Peak	39.01	-7.53	31.48	46.00	-14.52
432.00	Peak	36.59	-4.81	31.78	46.00	-14.22
518.50	Peak	37.91	-3.17	34.74	46.00	-11.26
691.20	Peak	34.58	-0.28	34.31	46.00	-11.69
864.00	Peak	33.50	2.60	36.10	46.00	-9.90

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.: TMWK2406002103KR

Project No	:TM-2405000413P	Test Date	:2024-07-05
Operation Band	:NFC_802.11n40_LTE Band2 QPSK1,0 20M	Temp./Humi.	:24.6/57
Frequency	:13.56 MHz_2437 MHz_1871 MHz	Antenna Pol.	:HORIZONTAL
Operation Mode	:TX	Engineer	:Ray Li
EUT Pol	:H	Test Chamber	: 966A
Setting	:		



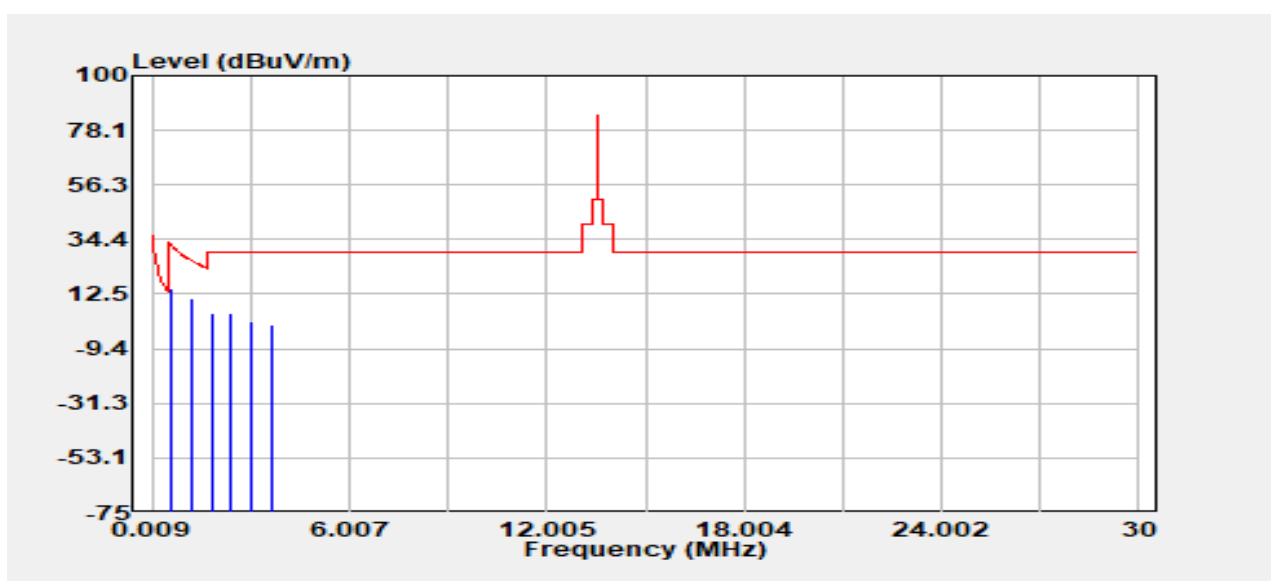
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dBμV	Factor dB	Actual FS dBμV/m	Limit dBμV/m	Margin dB
172.70	Peak	45.70	-11.26	34.44	43.50	-9.06
242.20	Peak	47.62	-10.62	37.00	46.00	-9.00
270.00	Peak	40.35	-9.02	31.33	46.00	-14.67
652.00	Peak	32.96	-0.70	32.26	46.00	-13.74
720.00	Peak	34.21	0.36	34.57	46.00	-11.43
930.50	Peak	36.48	3.53	40.00	46.00	-6.00

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.: TMWK2406002103KR

Project No :TM-2405000413P
Operation Band :NFC_802.11n40_LTE
Band13 QPSK1,0 10M
Frequency :13.56 MHz_2437
MHz_777.6 MHz
Operation Mode :TX
EUT Pol :H
Setting :

Test Date :2024-07-05
Temp./Humi. :24.6/57
Antenna Pol. :HORIZONTAL
Engineer :Ray Li
Test Chamber : 966A

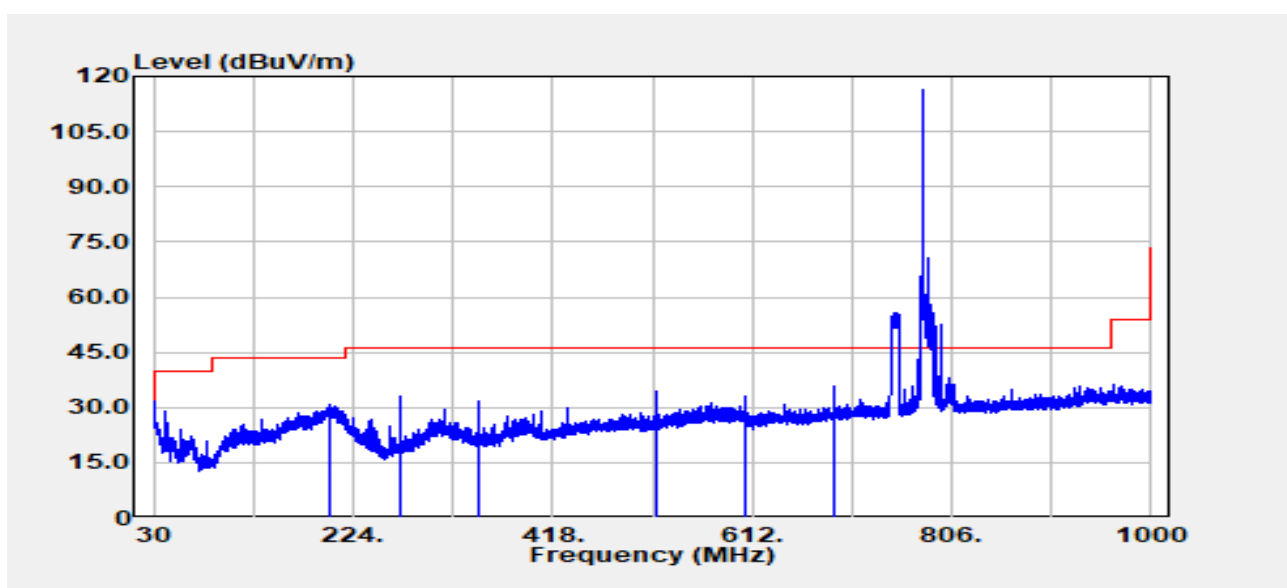


Freq.	Detector	Spectrum	Factor	Actual	Factor	Actual	Limit	Margin
MHz	Mode	Read Level	@3m	FS	@30m&300m	FS		
	PK/QP/AV	@3m	dB	@3m	dB	@30m&300m	dBμV/m	dB
		dBμV		dBμV/m		dBμV/m		
0.60	Peak	35.15	19.53	54.69	-40.00	14.69	31.99	-17.30
1.21	Peak	31.40	19.63	51.04	-40.00	11.04	25.97	-14.94
1.81	Peak	25.19	19.64	44.84	-40.00	4.84	29.54	-24.70
2.41	Peak	25.23	19.65	44.88	-40.00	4.88	29.54	-24.66
3.02	Peak	22.20	19.66	41.86	-40.00	1.86	29.54	-27.68
3.62	Peak	20.49	19.75	40.25	-40.00	0.25	29.54	-29.29

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.: TMWK2406002103KR

Project No	:TM-2405000413P	Test Date	:2024-07-05
Operation Band	:NFC_802.11n40_LTE Band13 QPSK1,0 10M	Temp./Humi.	:24.6/57
Frequency	:13.56 MHz_2437 MHz_777.6 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:TX	Engineer	:Ray Li
EUT Pol	:H	Test Chamber	: 966A
Setting	:		

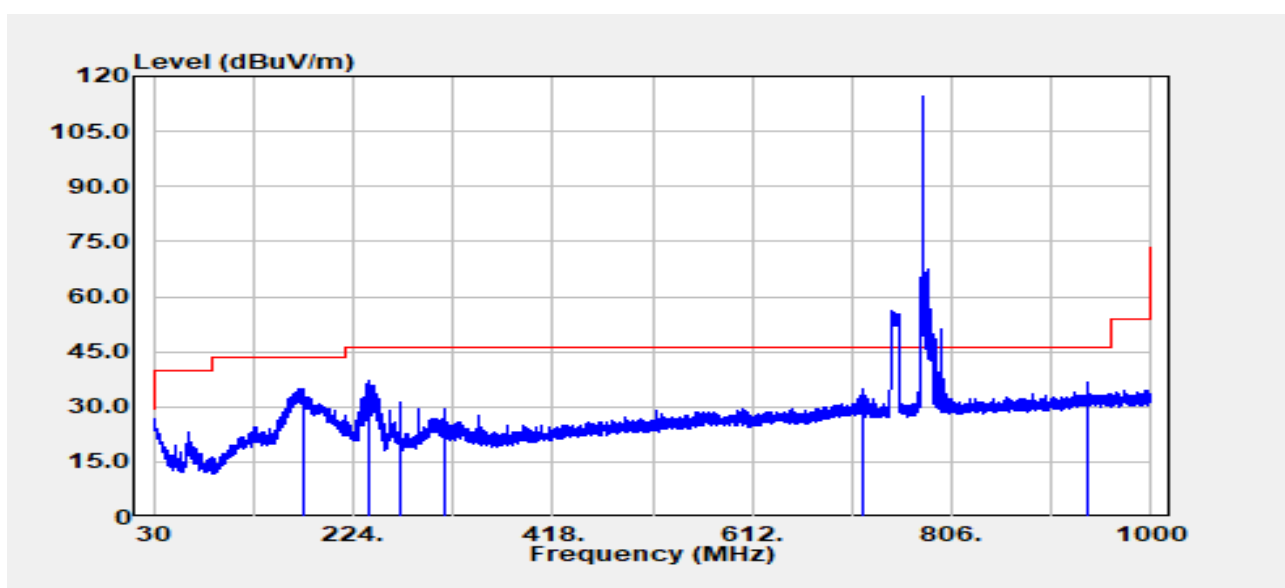


Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dBμV	Factor dB	Actual FS dBμV/m	Limit dBμV/m	Margin dB
200.40	Peak	40.51	-9.90	30.61	43.50	-12.89
270.00	Peak	42.00	-9.02	32.98	46.00	-13.02
345.60	Peak	39.28	-7.53	31.75	46.00	-14.25
518.40	Peak	37.40	-3.17	34.23	46.00	-11.77
604.80	Peak	35.28	-2.03	33.25	46.00	-12.75
691.20	Peak	35.88	-0.28	35.60	46.00	-10.40

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

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Project No	:TM-2405000413P	Test Date	:2024-07-05
Operation Band	:NFC_802.11n40_LTE Band13 QPSK1,0 10M	Temp./Humi.	:24.6/57
Frequency	:13.56 MHz_2437 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 dBμV	Factor dB	Actual FS dBμV/m	Limit dBμV/m	Margin dB
175.50	Peak	46.21	-11.32	34.89	43.50	-8.61
240.00	Peak	47.82	-10.60	37.22	46.00	-8.78
270.00	Peak	40.49	-9.02	31.47	46.00	-14.53
312.00	Peak	37.48	-8.26	29.23	46.00	-16.77
720.00	Peak	34.30	0.36	34.66	46.00	-11.34
937.50	Peak	32.80	3.79	36.59	46.00	-9.41

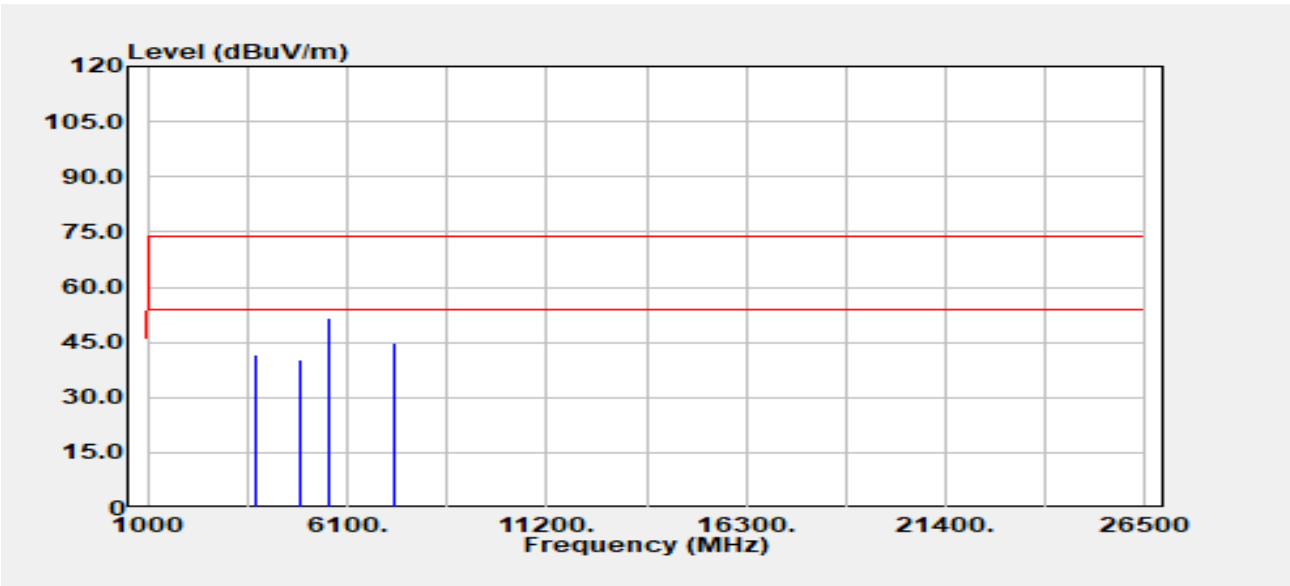
Note: The highest signals which over limit are WWAN co-location fundamental and harmonic signals. But it meets the signal's proprietary standards.



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Project No	:TM-2405000413P	Test Date	:2024-07-05
Operation Band	: NFC_802.11n40_LTE Band2 QPSK1,0_20M	Temp./Humi.	:24.6/57
Frequency	:2437_1871 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:TX	Engineer	:Tony Chao
EUT Pol	:H	Test Chamber	: 966A
Setting	:		



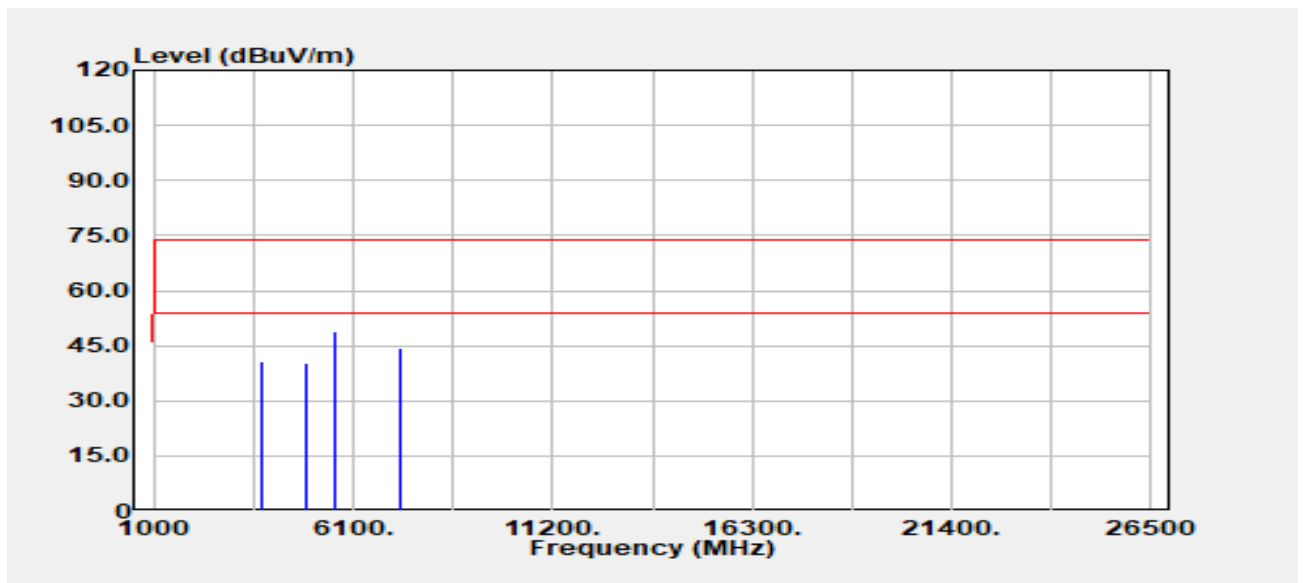
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dBμV	Factor dB	Actual FS dBμV/m	Limit dBμV/m	Margin dB
3742.00	Peak	41.39	0.21	41.60	82.20	-40.60
4874.00	Peak	37.80	2.49	40.29	74.00	-33.71
4874.00	Average	28.32	2.49	30.82	54.00	-23.18
5613.00	Peak	46.53	4.88	51.40	82.20	-30.80
7311.00	Peak	35.79	8.96	44.75	74.00	-29.25
7311.00	Average	26.81	8.96	35.77	54.00	-18.23

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.: TMWK2406002103KR

Project No	:TM-2405000413P	Test Date	:2024-07-05
Operation Band	: NFC_802.11n40_LTE Band2 QPSK1,0_20M	Temp./Humi.	:24.6/57
Frequency	:2437_1871 MHz	Antenna Pol.	:HORIZONTAL
Operation Mode	:TX	Engineer	:Tony Chao
EUT Pol	:H	Test Chamber	: 966A
Setting	:		



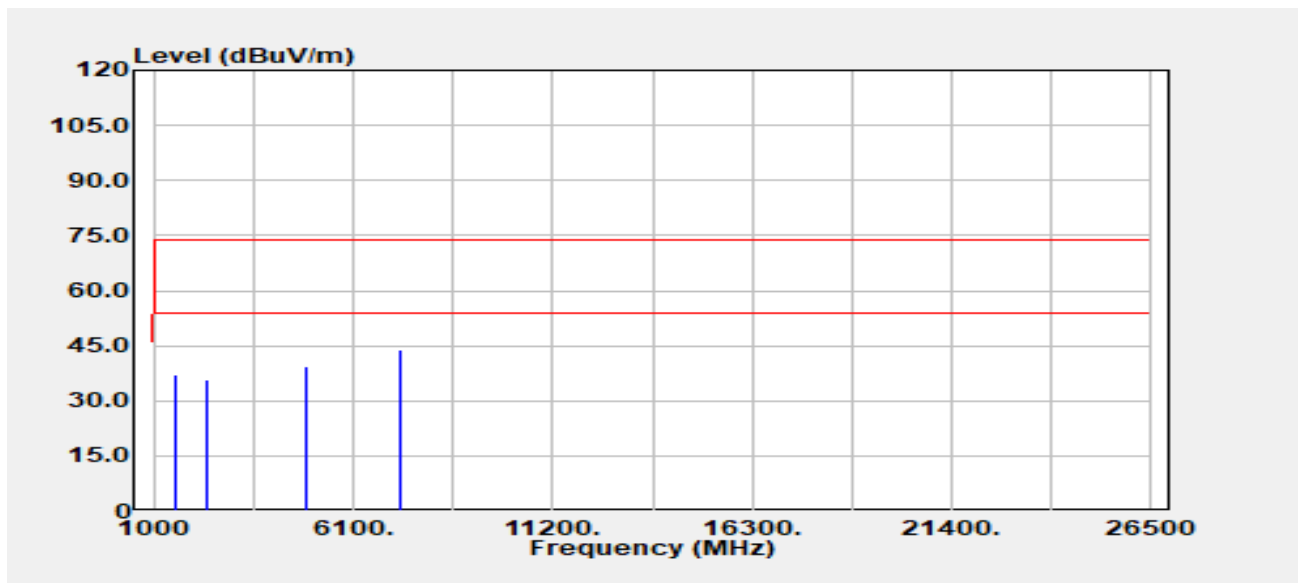
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dBμV	Factor dB	Actual FS dBμV/m	Limit dBμV/m	Margin dB
3742.00	Peak	40.74	0.21	40.94	82.20	-41.26
4874.00	Peak	37.62	2.49	40.11	74.00	-33.89
4874.00	Average	28.32	2.49	30.81	54.00	-23.19
5613.00	Peak	44.00	4.88	48.88	82.20	-33.32
7311.00	Peak	35.44	8.96	44.41	74.00	-29.59
7311.00	Average	26.95	8.96	35.91	54.00	-18.09

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.: TMWK2406002103KR

Project No	:TM-2405000413P	Test Date	:2024-07-05
Operation Band	: NFC_802.11n40_LTE Band13 QPSK1,0_10M	Temp./Humi.	:24.6/57
Frequency	:2437_777.6 MHz	Antenna Pol.	:Vertical
Operation Mode	:TX	Engineer	:Ray Li
EUT Pol	:H	Test Chamber	: 966A
Setting	:		



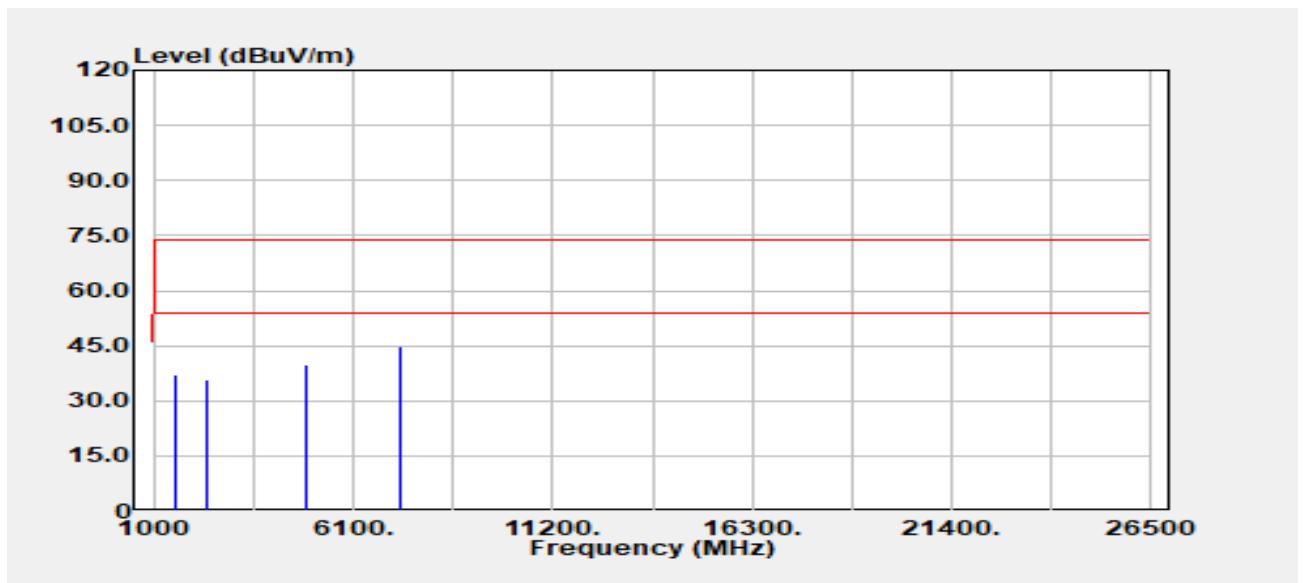
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dBμV	Factor dB	Actual FS dBUV/m	Limit dBUV/m	Margin dB
1555.20	Peak	44.30	-7.24	37.05	82.20	-45.15
2332.80	Peak	39.46	-3.61	35.85	82.20	-46.35
4874.00	Peak	36.89	2.49	39.38	74.00	-34.62
4874.00	Average	27.74	2.49	30.24	54.00	-23.76
7311.00	Peak	34.84	8.96	43.80	74.00	-30.20
7311.00	Average	26.38	8.96	35.34	54.00	-18.66

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.: TMWK2406002103KR

Project No	:TM-2405000413P	Test Date	:2024-07-05
Operation Band	: NFC_802.11n40_LTE Band13 QPSK1,0_10M	Temp./Humi.	:24.6/57
Frequency	:2437_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 dBμV	Factor dB	Actual FS dBμV/m	Limit dBμV/m	Margin dB
1555.20	Peak	44.35	-7.24	37.10	82.20	-45.10
2332.80	Peak	39.42	-3.61	35.81	82.20	-46.39
4874.00	Peak	37.20	2.49	39.70	74.00	-34.30
4874.00	Average	27.81	2.49	30.31	54.00	-23.69
7311.00	Peak	35.74	8.96	44.70	74.00	-29.30
7311.00	Average	26.39	8.96	35.35	54.00	-18.65

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 -