RADIO TEST REPORT

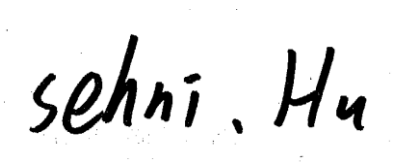
FCC 47 CFR PART 15 SUBPART C (CLASS II PERMISSIVE CHANGE) INDUSTRY CANADA RSS-247 (CLASS IV PERMISSIVE CHANGE)

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

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.

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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 / HMN	N722
Received Date	November 27, 2023
Date of Test	December 7, 2023 ~ April 10, 2024
Power Supply	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

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 EUT CHANNEL INFORMATION

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

Remark:
Refer as ANSI C63.10: 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.

1.4 MEASUREMENT UNCERTAINTY

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

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

1.5 FACILITIES AND TEST LOCATION

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

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

☐ 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 pubic Access Link (PAL) database, FCC Registration No. :444940, the FCC Designation No.:TW1309

1.6 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.

1.7 SUPPORT AND EUT ACCESSORIES EQUIPMENT

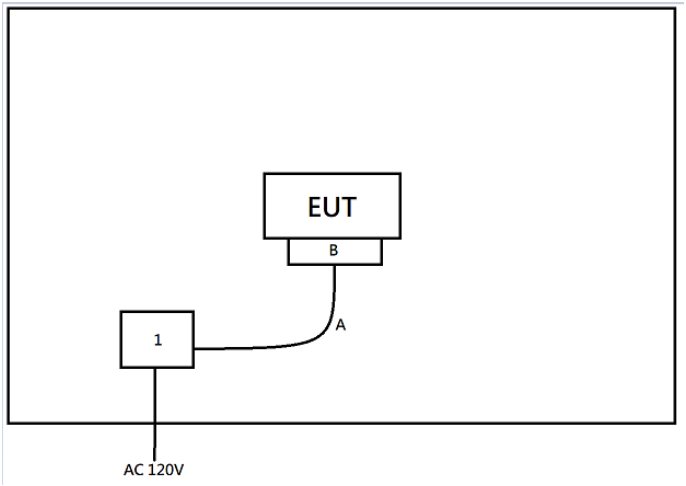
EUT Accessories Equipment						
No.	**Equipment**	**Brand**	**Model**	**Series No.**	**FCC ID**	**IC**
	N/A					

Support Equipment (Conducted)						
No.	**Equipment**	**Brand**	**Model**	**Series No.**	**FCC ID**	**IC**
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

1.8 TEST SETUP DIAGRAM



1.9 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.

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) 15.205	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.

3. DESCRIPTION OF TEST MODES

3.1 THE WORST MODE OF OPERATING CONDITION

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

Remark:

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

3.2 THE WORST MODE OF MEASUREMENT

AC Power Line 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	☒ 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 DC12V Fleet Cable with Cradle
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 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	☒ Mode 1 ☐ Mode 2 ☐ Mode 3 ☐ Mode 4

Radiated Emission Measurement [co-location]	
Test Condition	Radiated Emission [co-location]
Power supply Mode	Mode 1: BLE+LTE B2+NFC Mode 2: BLE+LTE B13+NFC
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 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.

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(dBμV)	
	Quasi-peak	Average
0.15 to 0.50	66 to 56*	56 to 46*
0.50 to 5	56	46
5 to 30	60	50

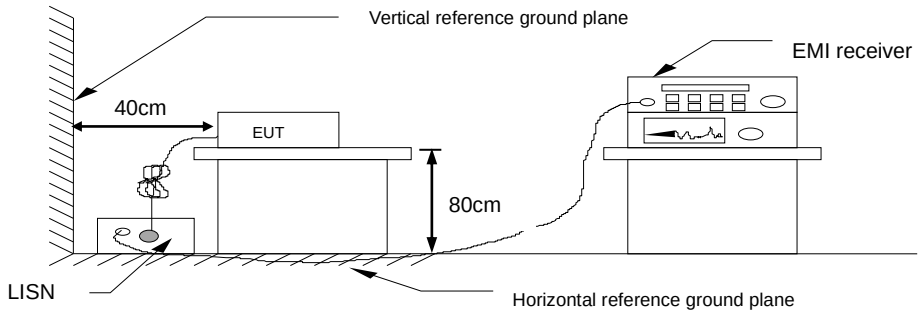
* Decreases with the logarithm of the frequency.

4.1.2 Test Procedure

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

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

4.1.3 Test Setup

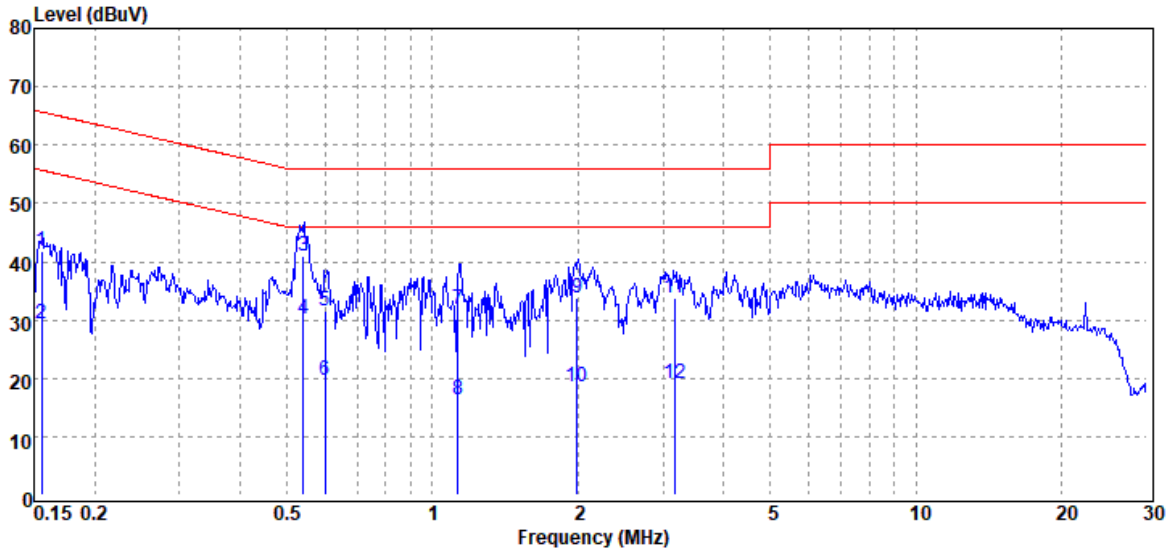


4.1.4 Test Result

Pass.

Test Data

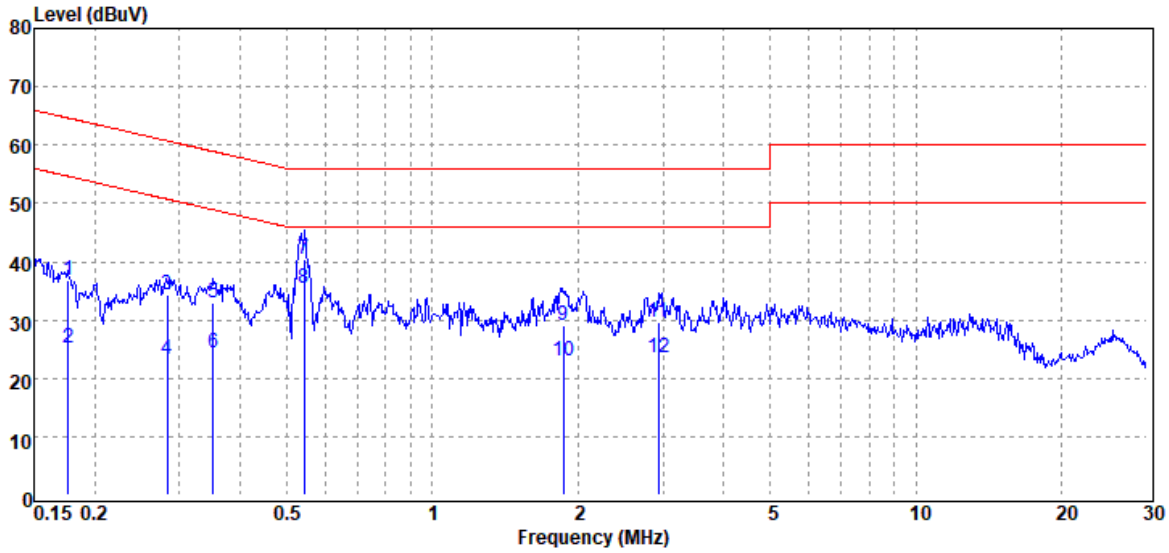
Project No	: TM-2311000354P	Test Date	: 2024-04-02
Operation Mode	: BLE 1M	Temp./Humi.	: 23.5°C / 52%
Test Chamber	: Conduction	Engineer	: Czerny Lin
Probe	: LINE	Test Voltage	: AC 120V/60Hz
Note	: Mode 1		



Freq.	Detector Mode	Spectrum Read Level	Factor	Actual FS	Limit	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV	dBµV	dB
0.156	QP	41.66	0.15	41.81	65.68	-23.87
0.156	Average	29.19	0.15	29.34	55.68	-26.34
0.541	QP	40.80	0.15	40.95	56.00	-15.05
0.541	Average	30.15	0.15	30.30	46.00	-15.70
0.601	QP	31.34	0.15	31.49	56.00	-24.51
0.601	Average	19.43	0.15	19.58	46.00	-26.42
1.130	QP	31.65	0.17	31.82	56.00	-24.18
1.130	Average	16.08	0.17	16.25	46.00	-29.75
1.993	QP	33.48	0.22	33.70	56.00	-22.30
1.993	Average	18.40	0.22	18.62	46.00	-27.38
3.165	QP	33.54	0.24	33.78	56.00	-22.22
3.165	Average	18.80	0.24	19.04	46.00	-26.96

Note: 1. Actual FS= Spectrum Read Level + Factor
Note: 2. Margin= Actual FS - Limit

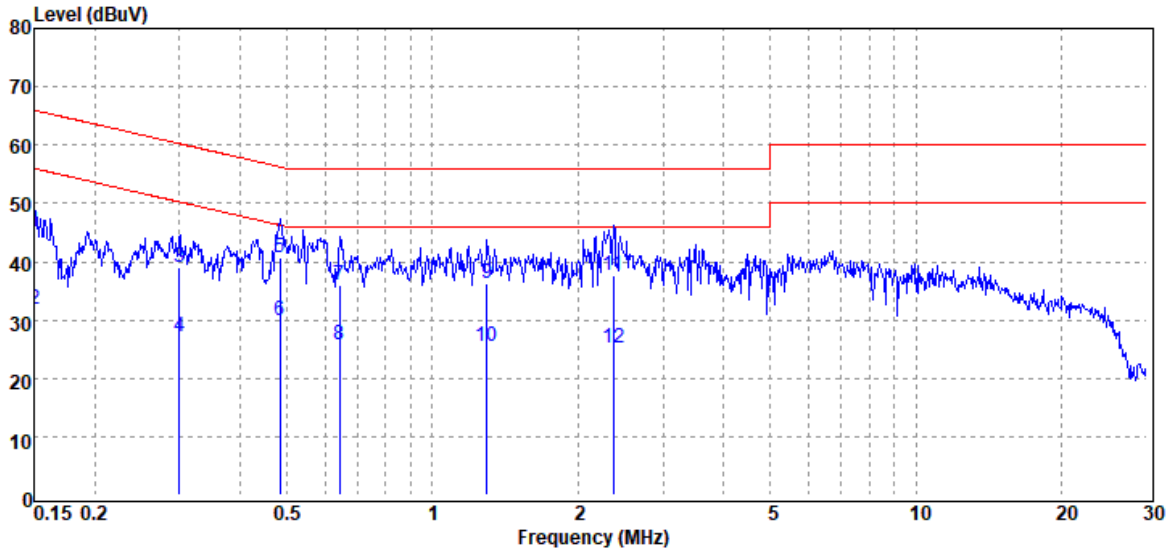
Project No	: TM-2311000354P	Test Date	: 2024-04-02
Operation Mode	: BLE 1M	Temp./Humi.	: 23.5°C / 52%
Test Chamber	: Conduction	Engineer	: Czerny Lin
Probe	: NEUTRAL	Test Voltage	: AC 120V/60Hz
Note	: Mode 1		



Freq.	Detector Mode	Spectrum Read Level	Factor	Actual FS	Limit	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV	dBµV	dB
0.177	QP	36.59	0.20	36.79	64.64	-27.85
0.177	Average	25.05	0.20	25.25	54.64	-29.39
0.282	QP	34.11	0.18	34.29	60.74	-26.45
0.282	Average	22.97	0.18	23.15	50.74	-27.59
0.353	QP	32.70	0.19	32.89	58.90	-26.01
0.353	Average	24.24	0.19	24.43	48.90	-24.47
0.543	QP	40.16	0.19	40.35	56.00	-15.65
0.543	Average	35.12	0.19	35.31	46.00	-10.69
1.865	QP	28.73	0.26	28.99	56.00	-27.01
1.865	Average	22.75	0.26	23.01	46.00	-22.99
2.933	QP	29.28	0.29	29.57	56.00	-26.43
2.933	Average	23.33	0.29	23.62	46.00	-22.38

Note: 1. Actual FS= Spectrum Read Level + Factor
Note: 2. Margin= Actual FS - Limit

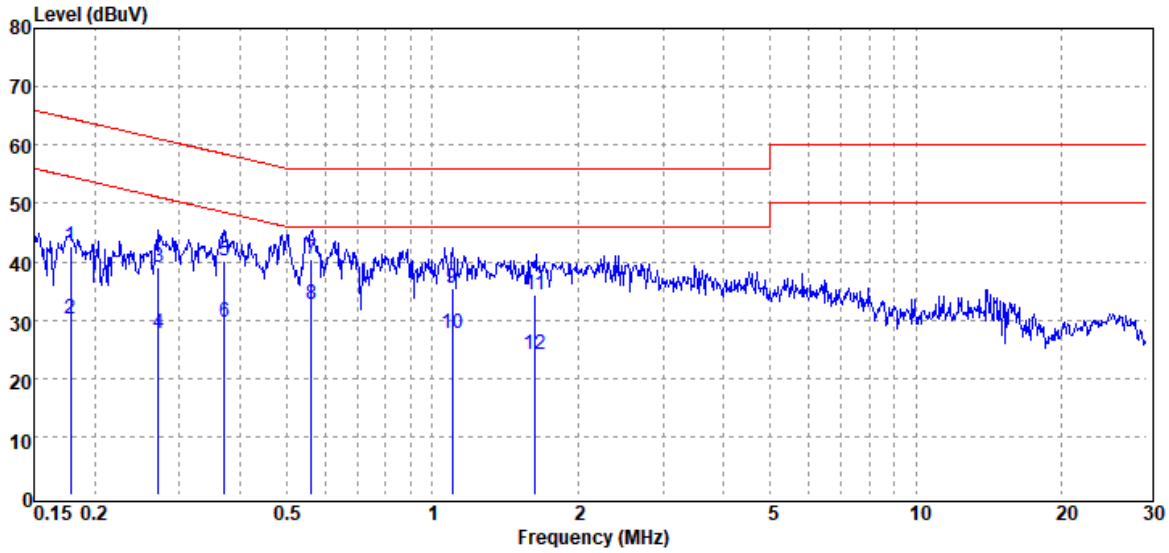
Project No	: TM-2311000354P	Test Date	: 2024-04-02
Operation Mode	: BLE 2M	Temp./Humi.	: 23.5°C / 52%
Test Chamber	: Conduction	Engineer	: Czerny Lin
Probe	: LINE	Test Voltage	: AC 120V/60Hz
Note	: Mode 1		



Freq.	Detector Mode	Spectrum Read Level	Factor	Actual FS	Limit	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV	dBµV	dB
0.150	QP	45.01	0.15	45.16	65.98	-20.82
0.150	Average	31.80	0.15	31.95	55.98	-24.03
0.299	QP	38.98	0.15	39.13	60.26	-21.13
0.299	Average	26.85	0.15	27.00	50.26	-23.26
0.484	QP	40.67	0.15	40.82	56.27	-15.45
0.484	Average	29.78	0.15	29.93	46.27	-16.34
0.643	QP	35.87	0.16	36.03	56.00	-19.97
0.643	Average	25.62	0.16	25.78	46.00	-20.22
1.294	QP	36.19	0.19	36.38	56.00	-19.62
1.294	Average	25.35	0.19	25.54	46.00	-20.46
2.370	QP	37.53	0.22	37.75	56.00	-18.25
2.370	Average	24.84	0.22	25.06	46.00	-20.94

Note: 1. Actual FS= Spectrum Read Level + Factor
Note: 2. Margin= Actual FS - Limit

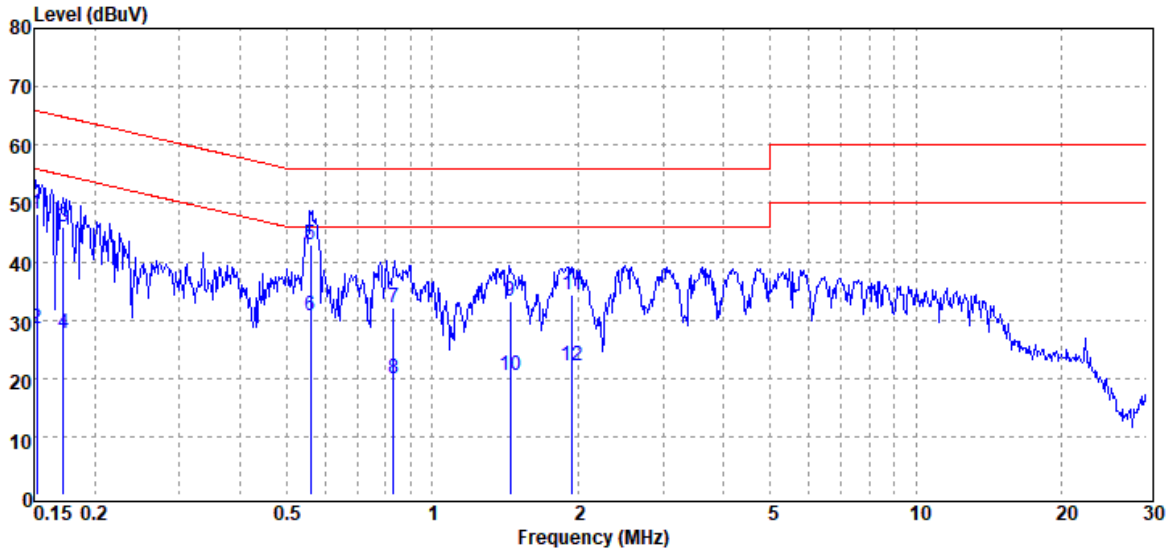
Project No	: TM-2311000354P	Test Date	: 2024-04-02
Operation Mode	: BLE 2M	Temp./Humi.	: 23.5°C / 52%
Test Chamber	: Conduction	Engineer	: Czerny Lin
Probe	: NEUTRAL	Test Voltage	: AC 120V/60Hz
Note	: Mode 1		



Freq.	Detector Mode	Spectrum Read Level	Factor	Actual FS	Limit	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV	dBµV	dB
0.178	QP	42.48	0.20	42.68	64.56	-21.88
0.178	Average	29.95	0.20	30.15	54.56	-24.41
0.271	QP	38.91	0.19	39.10	61.09	-21.99
0.271	Average	27.52	0.19	27.71	51.09	-23.38
0.372	QP	39.94	0.19	40.13	58.46	-18.33
0.372	Average	29.55	0.19	29.74	48.46	-18.72
0.562	QP	40.22	0.19	40.41	56.00	-15.59
0.562	Average	32.39	0.19	32.58	46.00	-13.42
1.100	QP	35.34	0.22	35.56	56.00	-20.44
1.100	Average	27.34	0.22	27.56	46.00	-18.44
1.632	QP	34.03	0.25	34.28	56.00	-21.72
1.632	Average	23.91	0.25	24.16	46.00	-21.84

Note: 1. Actual FS= Spectrum Read Level + Factor
Note: 2. Margin= Actual FS - Limit

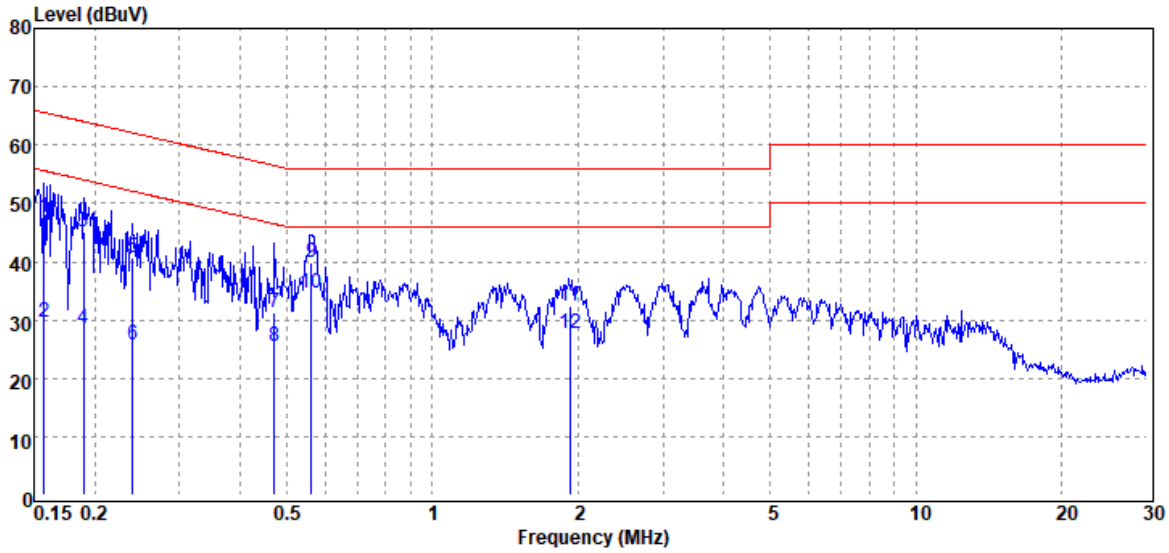
Project No	: TM-2311000354P	Test Date	: 2024-04-02
Operation Mode	: BLE 1M	Temp./Humi.	: 23.5°C / 52%
Test Chamber	: Conduction	Engineer	: Czerny Lin
Probe	: LINE	Test Voltage	: AC 230V/50Hz
Note	: Mode 1		



Freq.	Detector Mode	Spectrum Read Level	Factor	Actual FS	Limit	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV	dBµV	dB
0.152	QP	48.14	0.15	48.29	65.87	-17.58
0.152	Average	28.33	0.15	28.48	55.87	-27.39
0.173	QP	45.82	0.15	45.97	64.84	-18.87
0.173	Average	27.46	0.15	27.61	54.84	-27.23
0.560	QP	42.75	0.15	42.90	56.00	-13.10
0.560	Average	30.51	0.15	30.66	46.00	-15.34
0.832	QP	31.99	0.16	32.15	56.00	-23.85
0.832	Average	19.64	0.16	19.80	46.00	-26.20
1.448	QP	33.06	0.19	33.25	56.00	-22.75
1.448	Average	20.31	0.19	20.50	46.00	-25.50
1.945	QP	34.15	0.22	34.37	56.00	-21.63
1.945	Average	21.85	0.22	22.07	46.00	-23.93

Note: 1. Actual FS= Spectrum Read Level + Factor
Note: 2. Margin= Actual FS - Limit

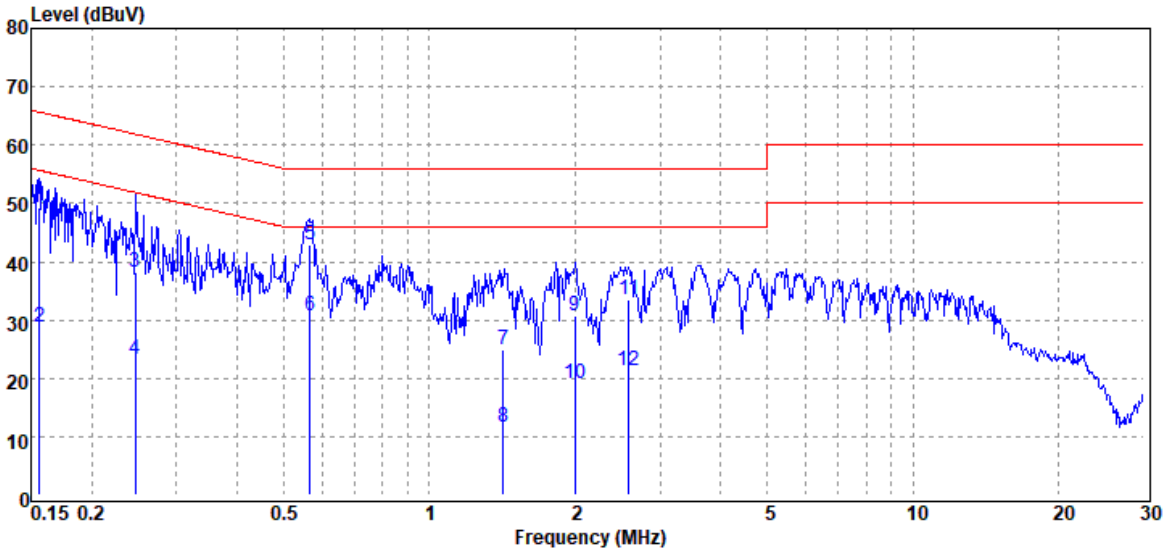
Project No	: TM-2311000354P	Test Date	: 2024-04-02
Operation Mode	: BLE 1M	Temp./Humi.	: 23.5°C / 52%
Test Chamber	: Conduction	Engineer	: Czerny Lin
Probe	: NEUTRAL	Test Voltage	: AC 230V/50Hz
Note	: Mode 1		



Freq.	Detector Mode	Spectrum Read Level	Factor	Actual FS	Limit	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV	dBµV	dB
0.158	QP	47.45	0.20	47.65	65.59	-17.94
0.158	Average	29.48	0.20	29.68	55.59	-25.91
0.190	QP	44.81	0.19	45.00	64.05	-19.05
0.190	Average	28.39	0.19	28.58	54.05	-25.47
0.240	QP	40.51	0.19	40.70	62.10	-21.40
0.240	Average	25.45	0.19	25.64	52.10	-26.46
0.471	QP	31.08	0.19	31.27	56.49	-25.22
0.471	Average	25.40	0.19	25.59	46.49	-20.90
0.562	QP	39.77	0.19	39.96	56.00	-16.04
0.562	Average	34.34	0.19	34.53	46.00	-11.47
1.923	QP	32.10	0.26	32.36	56.00	-23.64
1.923	Average	27.41	0.26	27.67	46.00	-18.33

Note: 1. Actual FS= Spectrum Read Level + Factor
Note: 2. Margin= Actual FS - Limit

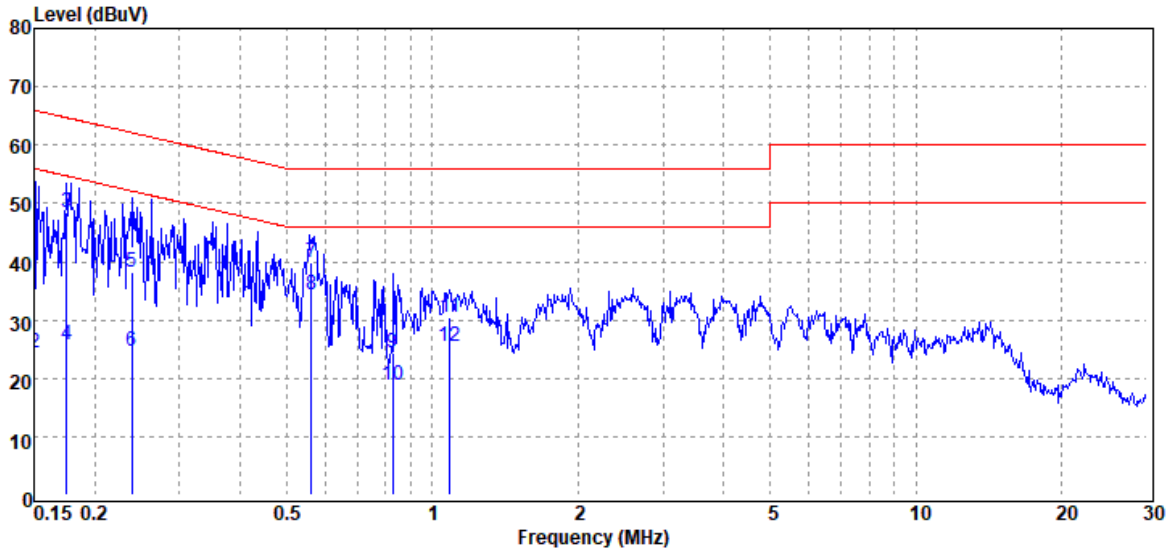
Project No	: TM-2311000354P	Test Date	: 2024-04-02
Operation Mode	: BLE 2M	Temp./Humi.	: 23.5°C / 52%
Test Chamber	: Conduction	Engineer	: Czerny Lin
Probe	: LINE	Test Voltage	: AC 230V/50Hz
Note	: Mode 1		



Freq.	Detector Mode	Spectrum Read Level	Factor	Actual FS	Limit	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV	dBµV	dB
0.156	QP	49.20	0.15	49.35	65.67	-16.32
0.156	Average	28.55	0.15	28.70	55.67	-26.97
0.247	QP	38.13	0.15	38.28	61.87	-23.59
0.247	Average	23.09	0.15	23.24	51.87	-28.63
0.566	QP	42.88	0.15	43.03	56.00	-12.97
0.566	Average	30.48	0.15	30.63	46.00	-15.37
1.420	QP	24.61	0.19	24.80	56.00	-31.20
1.420	Average	11.57	0.19	11.76	46.00	-34.24
1.998	QP	30.64	0.22	30.86	56.00	-25.14
1.998	Average	18.85	0.22	19.07	46.00	-26.93
2.588	QP	33.34	0.24	33.58	56.00	-22.42
2.588	Average	20.99	0.24	21.23	46.00	-24.77

Note: 1. Actual FS= Spectrum Read Level + Factor
Note: 2. Margin= Actual FS - Limit

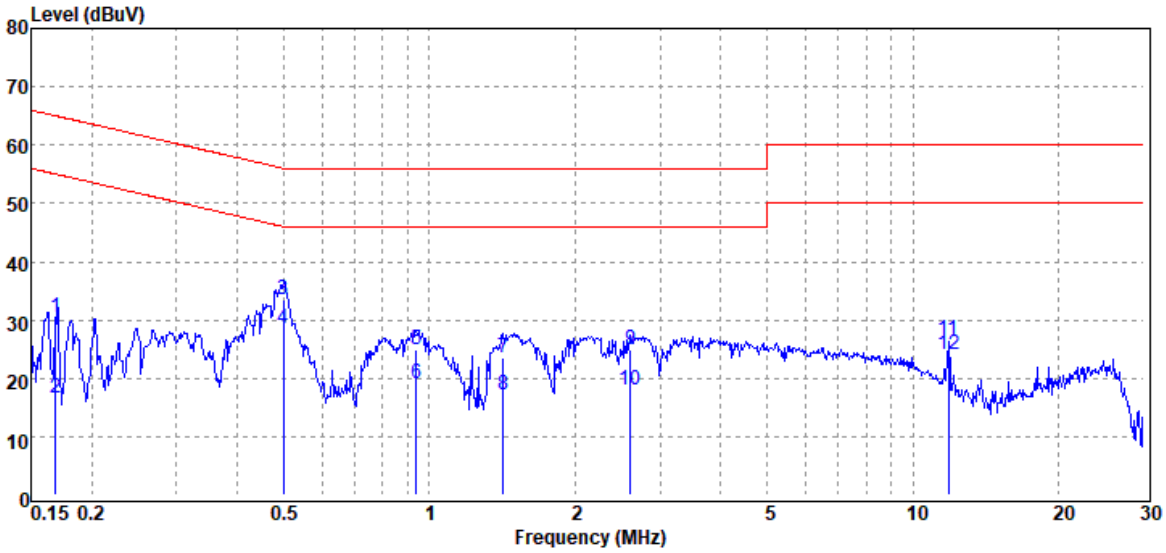
Project No	: TM-2311000354P	Test Date	: 2024-04-02
Operation Mode	: BLE 2M	Temp./Humi.	: 23.5°C / 52%
Test Chamber	: Conduction	Engineer	: Czerny Lin
Probe	: NEUTRAL	Test Voltage	: AC 230V/50Hz
Note	: Mode 1		



Freq.	Detector Mode	Spectrum Read Level	Factor	Actual FS	Limit	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV	dBµV	dB
0.150	QP	45.20	0.20	45.40	65.99	-20.59
0.150	Average	24.04	0.20	24.24	55.99	-31.75
0.175	QP	48.14	0.20	48.34	64.71	-16.37
0.175	Average	25.42	0.20	25.62	54.71	-29.09
0.239	QP	37.89	0.19	38.08	62.15	-24.07
0.239	Average	24.53	0.19	24.72	52.15	-27.43
0.561	QP	39.54	0.19	39.73	56.00	-16.27
0.561	Average	34.26	0.19	34.45	46.00	-11.55
0.828	QP	24.21	0.21	24.42	56.00	-31.58
0.828	Average	18.66	0.21	18.87	46.00	-27.13
1.087	QP	30.16	0.21	30.37	56.00	-25.63
1.087	Average	25.21	0.21	25.42	46.00	-20.58

Note: 1. Actual FS= Spectrum Read Level + Factor
Note: 2. Margin= Actual FS - Limit

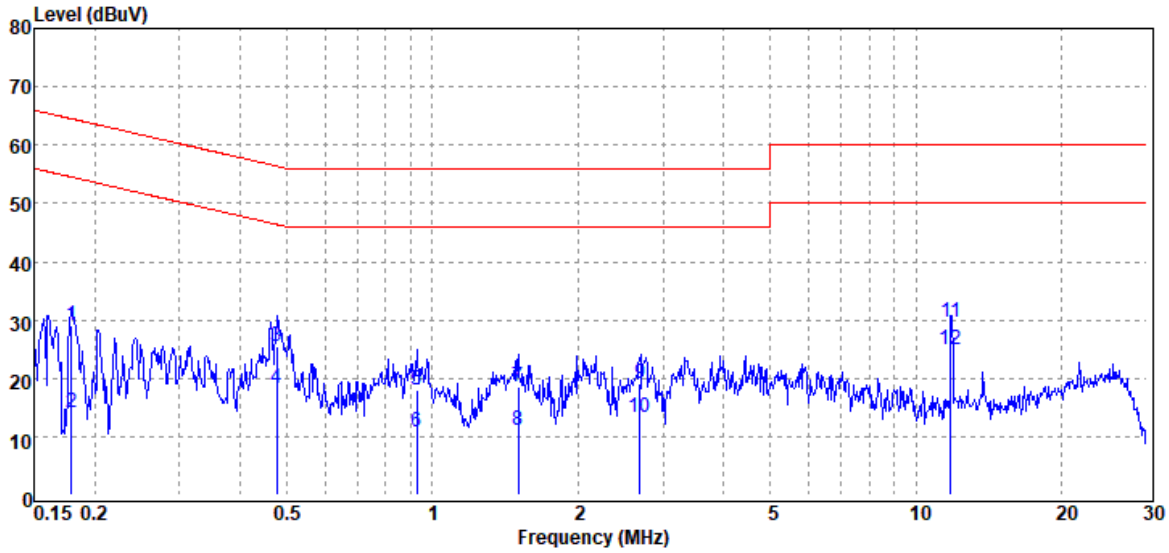
Project No	: TM-2311000354P	Test Date	: 2024-04-08
Operation Mode	: BLE 1M	Temp./Humi.	: 21.5°C / 50%
Test Chamber	: Conduction	Engineer	: Czerny Lin
Probe	: LINE	Test Voltage	: AC 120V/60Hz
Note	: Mode 2		



	Freq.	Detector Mode	Spectrum Read Level	Factor	Actual FS	Limit	Margin
	MHz	PK/QP/AV	dBµV	dB	dBµV	dBµV	dB
	0.169	QP	30.41	0.15	30.56	65.01	-34.45
	0.169	Average	16.47	0.15	16.62	55.01	-38.39
	0.499	QP	33.37	0.15	33.52	56.02	-22.50
	0.499	Average	28.32	0.15	28.47	46.02	-17.55
	0.938	QP	24.78	0.16	24.94	56.00	-31.06
	0.938	Average	18.89	0.16	19.05	46.00	-26.95
	1.422	QP	23.26	0.19	23.45	56.00	-32.55
	1.422	Average	16.96	0.19	17.15	46.00	-28.85
	2.602	QP	24.70	0.24	24.94	56.00	-31.06
	2.602	Average	17.64	0.24	17.88	46.00	-28.12
	11.825	QP	26.07	0.40	26.47	60.00	-33.53
	11.825	Average	23.72	0.40	24.12	50.00	-25.88

Note: 1. Actual FS= Spectrum Read Level + Factor
Note: 2. Margin= Actual FS - Limit

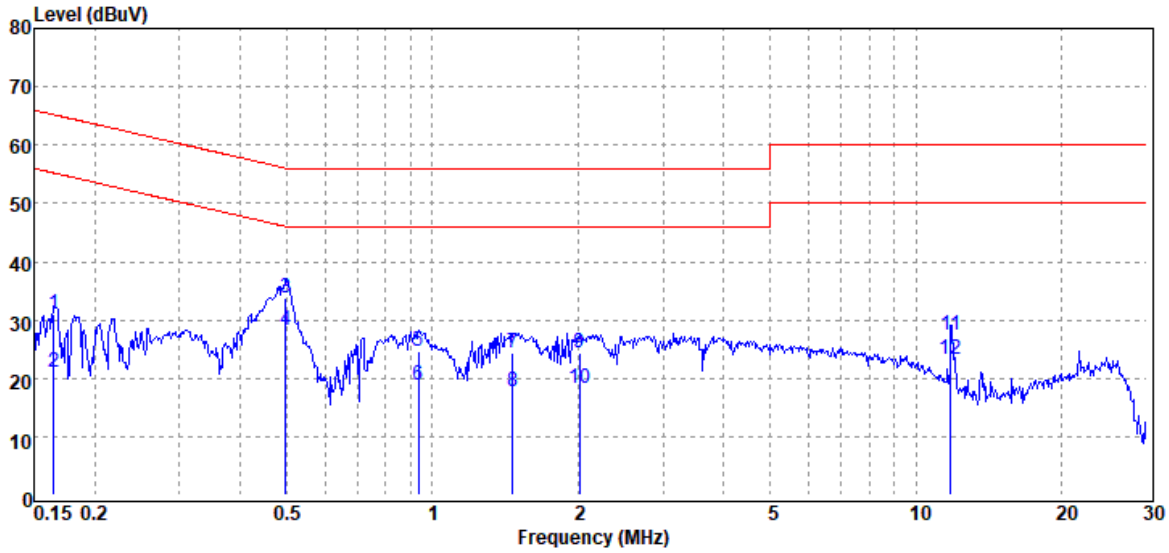
Project No	: TM-2311000354P	Test Date	: 2024-04-08
Operation Mode	: BLE 1M	Temp./Humi.	: 21.5°C / 50%
Test Chamber	: Conduction	Engineer	: Czerny Lin
Probe	: NEUTRAL	Test Voltage	: AC 120V/60Hz
Note	: Mode 2		



Freq.	Detector Mode	Spectrum Read Level	Factor	Actual FS	Limit	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV	dBµV	dB
0.179	QP	28.75	0.20	28.95	64.52	-35.57
0.179	Average	14.04	0.20	14.24	54.52	-40.28
0.477	QP	25.15	0.19	25.34	56.39	-31.05
0.477	Average	17.95	0.19	18.14	46.39	-28.25
0.929	QP	17.69	0.21	17.90	56.00	-38.10
0.929	Average	10.55	0.21	10.76	46.00	-35.24
1.506	QP	18.18	0.24	18.42	56.00	-37.58
1.506	Average	10.93	0.24	11.17	46.00	-34.83
2.681	QP	18.76	0.28	19.04	56.00	-36.96
2.681	Average	13.11	0.28	13.39	46.00	-32.61
11.815	QP	29.11	0.42	29.53	60.00	-30.47
11.815	Average	24.58	0.42	25.00	50.00	-25.00

Note: 1. Actual FS= Spectrum Read Level + Factor
Note: 2. Margin= Actual FS - Limit

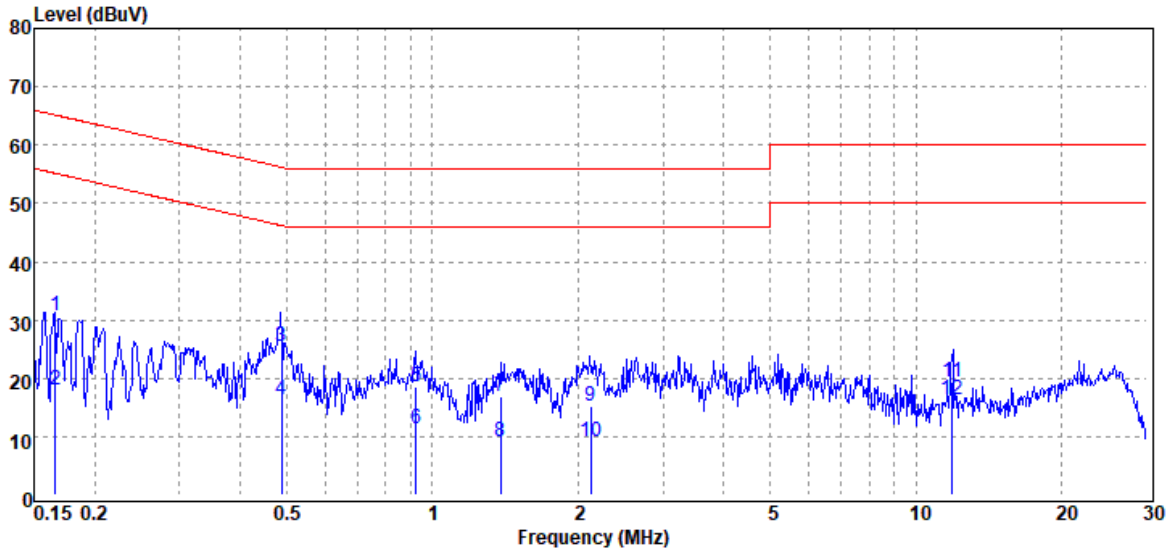
Project No	: TM-2311000354P	Test Date	: 2024-04-08
Operation Mode	: BLE 2M	Temp./Humi.	: 21.5°C / 50%
Test Chamber	: Conduction	Engineer	: Czerny Lin
Probe	: LINE	Test Voltage	: AC 120V/60Hz
Note	: Mode 2		



Freq.	Detector Mode	Spectrum Read Level	Factor	Actual FS	Limit	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV	dBµV	dB
0.165	QP	30.80	0.15	30.95	65.22	-34.27
0.165	Average	20.83	0.15	20.98	55.22	-34.24
0.498	QP	33.54	0.15	33.69	56.04	-22.35
0.498	Average	28.06	0.15	28.21	46.04	-17.83
0.937	QP	24.54	0.16	24.70	56.00	-31.30
0.937	Average	18.67	0.16	18.83	46.00	-27.17
1.467	QP	24.05	0.19	24.24	56.00	-31.76
1.467	Average	17.45	0.19	17.64	46.00	-28.36
2.016	QP	24.15	0.22	24.37	56.00	-31.63
2.016	Average	17.94	0.22	18.16	46.00	-27.84
11.815	QP	27.03	0.40	27.43	60.00	-32.57
11.815	Average	22.90	0.40	23.30	50.00	-26.70

Note: 1. Actual FS= Spectrum Read Level + Factor
Note: 2. Margin= Actual FS - Limit

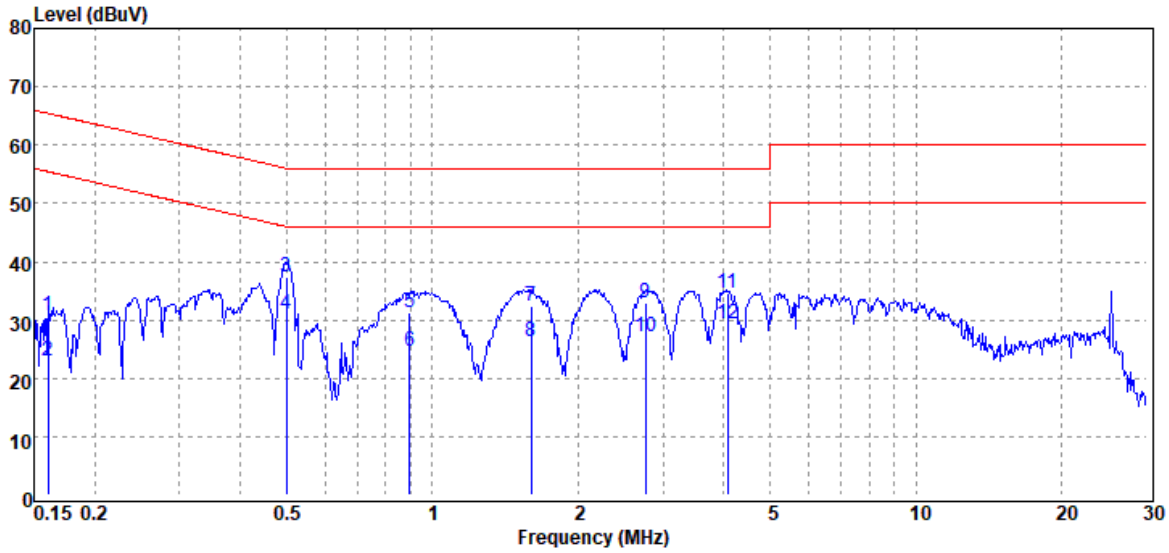
Project No	: TM-2311000354P	Test Date	: 2024-04-08
Operation Mode	: BLE 2M	Temp./Humi.	: 21.5°C / 50%
Test Chamber	: Conduction	Engineer	: Czerny Lin
Probe	: NEUTRAL	Test Voltage	: AC 120V/60Hz
Note	: Mode 2		



Freq.	Detector Mode	Spectrum Read Level	Factor	Actual FS	Limit	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV	dBµV	dB
0.166	QP	30.59	0.19	30.78	65.16	-34.38
0.166	Average	17.92	0.19	18.11	55.16	-37.05
0.488	QP	25.37	0.19	25.56	56.20	-30.64
0.488	Average	16.17	0.19	16.36	46.20	-29.84
0.924	QP	18.42	0.21	18.63	56.00	-37.37
0.924	Average	11.19	0.21	11.40	46.00	-34.60
1.383	QP	16.61	0.23	16.84	56.00	-39.16
1.383	Average	8.81	0.23	9.04	46.00	-36.96
2.123	QP	14.88	0.26	15.14	56.00	-40.86
2.123	Average	8.99	0.26	9.25	46.00	-36.75
11.885	QP	19.01	0.42	19.43	60.00	-40.57
11.885	Average	15.93	0.42	16.35	50.00	-33.65

Note: 1. Actual FS= Spectrum Read Level + Factor
Note: 2. Margin= Actual FS - Limit

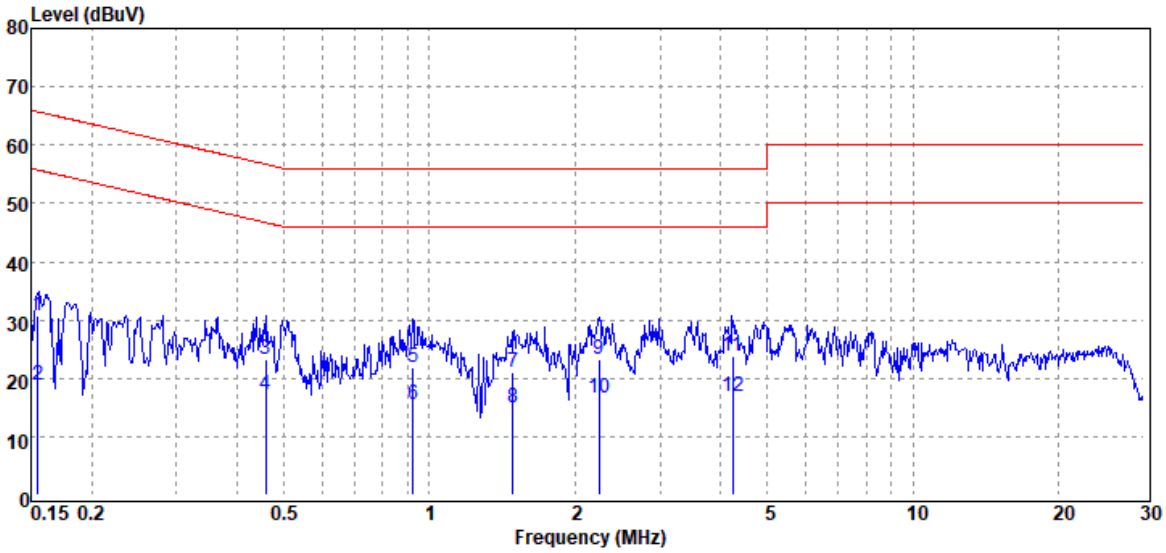
Project No	: TM-2311000354P	Test Date	: 2024-04-08
Operation Mode	: BLE 1M	Temp./Humi.	: 21.5°C / 50%
Test Chamber	: Conduction	Engineer	: Czerny Lin
Probe	: LINE	Test Voltage	: AC 230V/50Hz
Note	: Mode 2		



Freq.	Detector Mode	Spectrum Read Level	Factor	Actual FS	Limit	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV	dBµV	dB
0.160	QP	30.47	0.15	30.62	65.45	-34.83
0.160	Average	22.90	0.15	23.05	55.45	-32.40
0.499	QP	37.15	0.15	37.30	56.02	-18.72
0.499	Average	30.94	0.15	31.09	46.02	-14.93
0.896	QP	31.19	0.16	31.35	56.00	-24.65
0.896	Average	24.58	0.16	24.74	46.00	-21.26
1.600	QP	32.13	0.20	32.33	56.00	-23.67
1.600	Average	26.10	0.20	26.30	46.00	-19.70
2.756	QP	32.68	0.24	32.92	56.00	-23.08
2.756	Average	26.90	0.24	27.14	46.00	-18.86
4.086	QP	34.21	0.26	34.47	56.00	-21.53
4.086	Average	29.18	0.26	29.44	46.00	-16.56

Note: 1. Actual FS= Spectrum Read Level + Factor
Note: 2. Margin= Actual FS - Limit

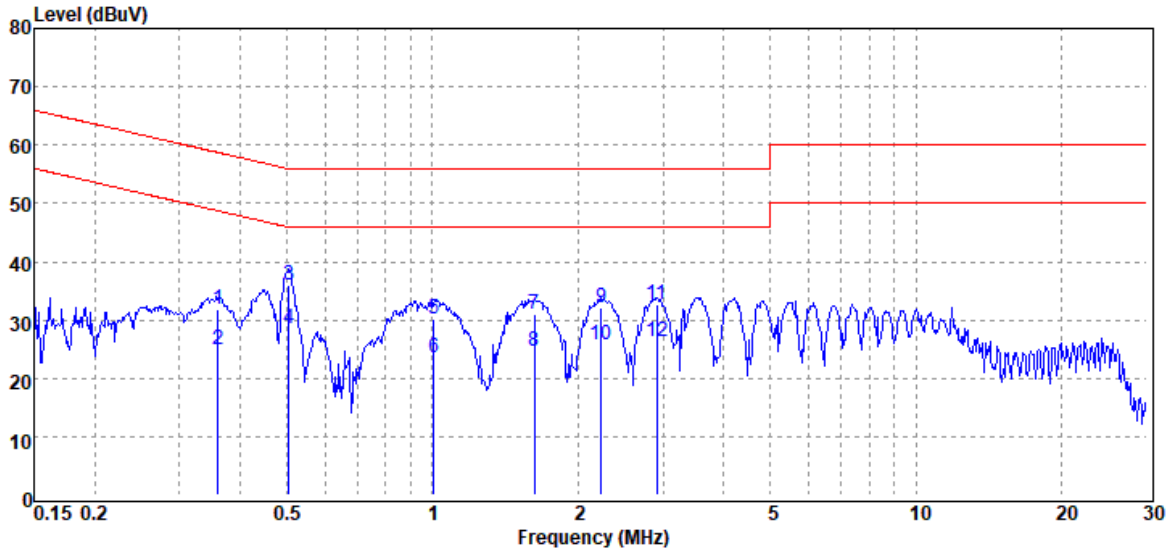
Project No	: TM-2311000354P	Test Date	: 2024-04-08
Operation Mode	: BLE 1M	Temp./Humi.	: 21.5°C / 50%
Test Chamber	: Conduction	Engineer	: Czerny Lin
Probe	: NEUTRAL	Test Voltage	: AC 230V/50Hz
Note	: Mode 2		



Freq.	Detector Mode	Spectrum Read Level	Factor	Actual FS	Limit	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV	dBµV	dB
0.155	QP	30.51	0.20	30.71	65.72	-35.01
0.155	Average	18.68	0.20	18.88	55.72	-36.84
0.459	QP	23.15	0.19	23.34	56.71	-33.37
0.459	Average	17.03	0.19	17.22	46.71	-29.49
0.925	QP	21.59	0.21	21.80	56.00	-34.20
0.925	Average	15.41	0.21	15.62	46.00	-30.38
1.489	QP	20.91	0.24	21.15	56.00	-34.85
1.489	Average	14.80	0.24	15.04	46.00	-30.96
2.241	QP	22.88	0.26	23.14	56.00	-32.86
2.241	Average	16.45	0.26	16.71	46.00	-29.29
4.241	QP	23.40	0.31	23.71	56.00	-32.29
4.241	Average	16.58	0.31	16.89	46.00	-29.11

Note: 1. Actual FS= Spectrum Read Level + Factor
Note: 2. Margin= Actual FS - Limit

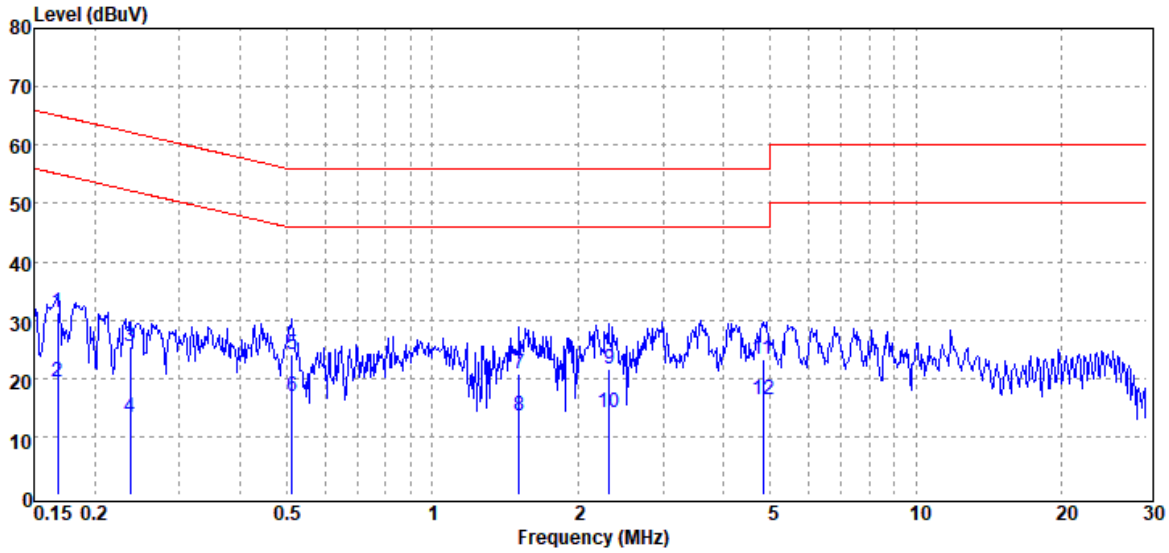
Project No	: TM-2311000354P	Test Date	: 2024-04-08
Operation Mode	: BLE 2M	Temp./Humi.	: 21.5°C / 50%
Test Chamber	: Conduction	Engineer	: Czerny Lin
Probe	: LINE	Test Voltage	: AC 230V/50Hz
Note	: Mode 2		



Freq.	Detector Mode	Spectrum Read Level	Factor	Actual FS	Limit	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV	dBµV	dB
0.361	QP	31.63	0.15	31.78	58.71	-26.93
0.361	Average	24.65	0.15	24.80	48.71	-23.91
0.504	QP	35.81	0.15	35.96	56.00	-20.04
0.504	Average	28.31	0.15	28.46	46.00	-17.54
1.007	QP	30.14	0.16	30.30	56.00	-25.70
1.007	Average	23.35	0.16	23.51	46.00	-22.49
1.623	QP	30.85	0.20	31.05	56.00	-24.95
1.623	Average	24.36	0.20	24.56	46.00	-21.44
2.236	QP	31.91	0.22	32.13	56.00	-23.87
2.236	Average	25.64	0.22	25.86	46.00	-20.14
2.908	QP	32.47	0.24	32.71	56.00	-23.29
2.908	Average	26.13	0.24	26.37	46.00	-19.63

Note: 1. Actual FS= Spectrum Read Level + Factor
Note: 2. Margin= Actual FS - Limit

Project No	: TM-2311000354P	Test Date	: 2024-04-08
Operation Mode	: BLE 2M	Temp./Humi.	: 21.5°C / 50%
Test Chamber	: Conduction	Engineer	: Czerny Lin
Probe	: NEUTRAL	Test Voltage	: AC 230V/50Hz
Note	: Mode 2		



Freq.	Detector Mode	Spectrum Read Level	Factor	Actual FS	Limit	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV	dBµV	dB
0.168	QP	31.16	0.19	31.35	65.06	-33.71
0.168	Average	19.06	0.19	19.25	55.06	-35.81
0.237	QP	25.20	0.19	25.39	62.20	-36.81
0.237	Average	13.08	0.19	13.27	52.20	-38.93
0.512	QP	23.88	0.19	24.07	56.00	-31.93
0.512	Average	16.66	0.19	16.85	46.00	-29.15
1.513	QP	20.61	0.24	20.85	56.00	-35.15
1.513	Average	13.33	0.24	13.57	46.00	-32.43
2.319	QP	21.40	0.27	21.67	56.00	-34.33
2.319	Average	13.85	0.27	14.12	46.00	-31.88
4.827	QP	22.93	0.33	23.26	56.00	-32.74
4.827	Average	15.95	0.33	16.28	46.00	-29.72

Note: 1. Actual FS= Spectrum Read Level + Factor
Note: 2. Margin= Actual FS - Limit

4.2 OUTPUT POWER MEASUREMENT

4.2.1 Test Limit

According to §15.247(b)(3) and RSS-247 section 5.4(d)

Peak output power：

FCC

For systems using digital modulation in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands: 1 Watt. As an alternative to a peak power measurement,

IC

For DTSs 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), 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.

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

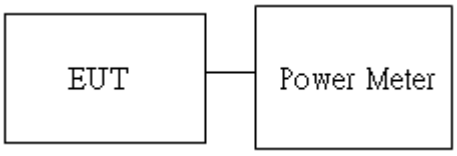
Average output power：For reporting purposes only.

4.2.2 Test Procedure

Test method Refer as ANSI C63.10:2013.

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

4.2.3 Test Setup



4.2.4 Test Result

Temperature:	21.8℃	**Test date:**	December 7, 2023
Humidity:	53% RH	**Tested by:**	Marco Chan

Peak & Average output power：

BLE 1M mode:

CH	Frequency (MHz)	Power set	Peak Output Power (dBm)	Required Limit (dBm)
Low	2402	default	-1.99	30
Mid	2440	default	-1.95	30
High	2480	default	-1.23	30
CH	**Frequency (MHz)**	**Power set**	**Avg. Output Power (dBm)**	**Required Limit (dBm)**
Low	2402	default	-2.04	30
Mid	2440	default	-1.96	30
High	2480	default	-1.25	30

Note:

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

BLE 2M mode:

CH	Frequency (MHz)	Power set	Peak Output Power (dBm)	Required Limit (dBm)
Low	2402	default	-1.79	30
Mid	2440	default	-1.73	30
High	2480	default	-1.03	30
CH	**Frequency (MHz)**	**Power set**	**Avg. Output Power (dBm)**	**Required Limit (dBm)**
Low	2402	default	-2.13	30
Mid	2440	default	-1.99	30
High	2480	default	-1.49	30

Note:

1.Measured by power meter, cable loss 0 dB + Duty cycle factor has been offseted to the power meter for Avg. power and cable loss has been offseted for Peak power measurement.

EIRP Power:

EIRP BLE 1M mode

CH	Frequency (MHz)	Power set	Avg. Output Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	Limit
Low	2402	default	-2.04	0.44	-1.60	4W= 36 dBm
Mid	2440	default	-1.96	0.44	-1.52	4W= 36 dBm
High	2480	default	-1.25	0.44	-0.81	4W= 36 dBm

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

EIRP BLE 2M mode

CH	Frequency (MHz)	Power set	Avg. Output Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	Limit
Low	2402	default	-2.13	0.44	-1.69	4W= 36 dBm
Mid	2440	default	-1.99	0.44	-1.55	4W= 36 dBm
High	2480	default	-1.49	0.44	-1.05	4W= 36 dBm

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

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.

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.

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.

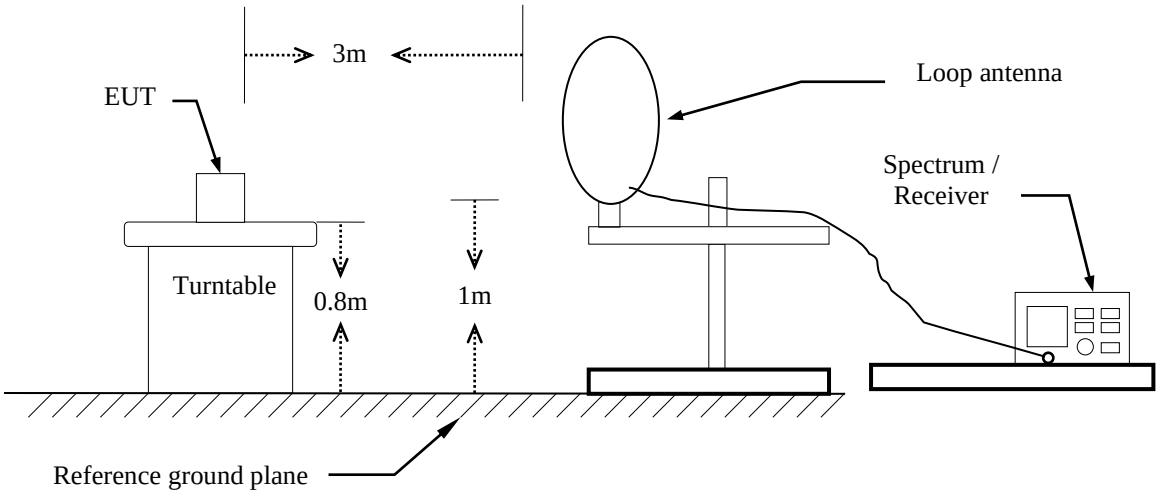
2. The turntable shall be rotated for 360 degrees to determine the position of maximum emission level. And EUT is set 3m away from the receiving antenna, which is scanned from 1m to 4m above the ground plane to find out the highest emissions. Measurement are made polarized in both the vertical and the 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.

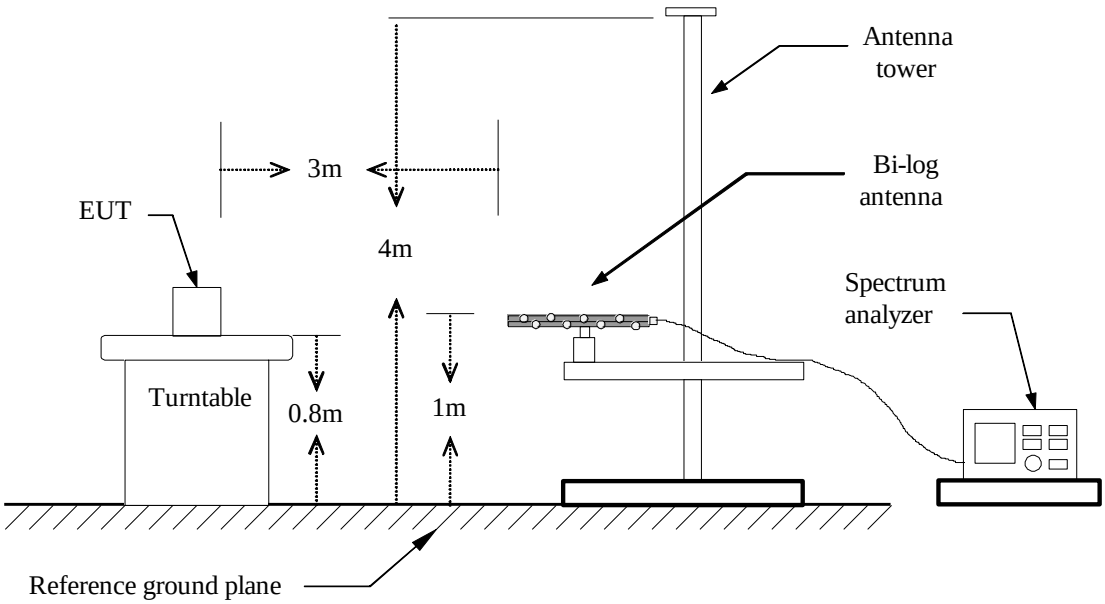
Remark:
1. Although these tests were performed other than open area test site, adequate comparison measurements were confirmed against 30 m open are test site. Therefore sufficient tests were made to demonstrate that the alternative site produces results that correlate with the ones of tests made in an open field based on KDB 414788.
2. No emission found between lowest internal used/generated frequency to 30MHz (9kHz~30MHz).
3. The SA setting following：
Below 1G：RBW = 100kHz, VBW ≥ 3 RBW, Sweep = Auto, Detector = Peak, Trace = Max hold.
4. Data result
Actual FS=Spectrum Reading Level+Factor
Margin=Actual FS- Limit

4.3.3 Test Setup

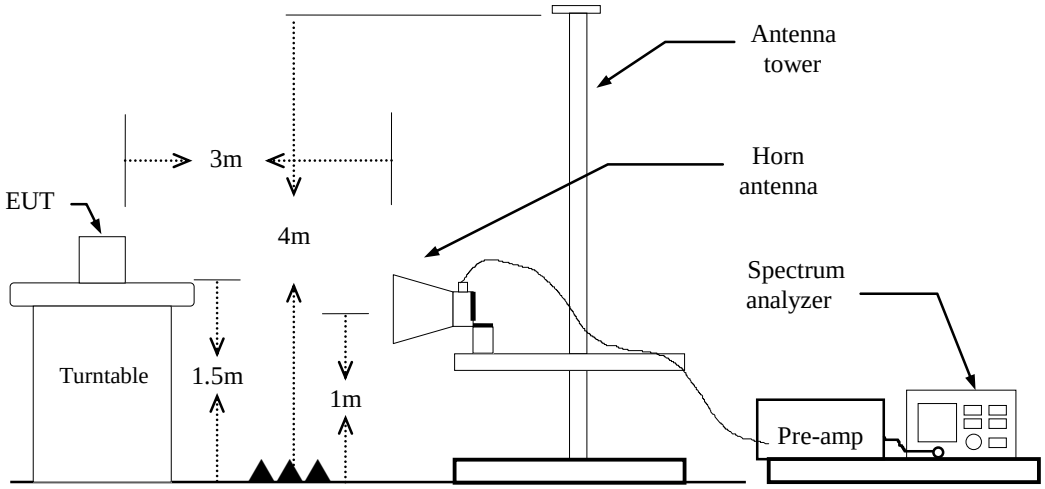
9kHz ~ 30MHz



30MHz ~ 1GHz



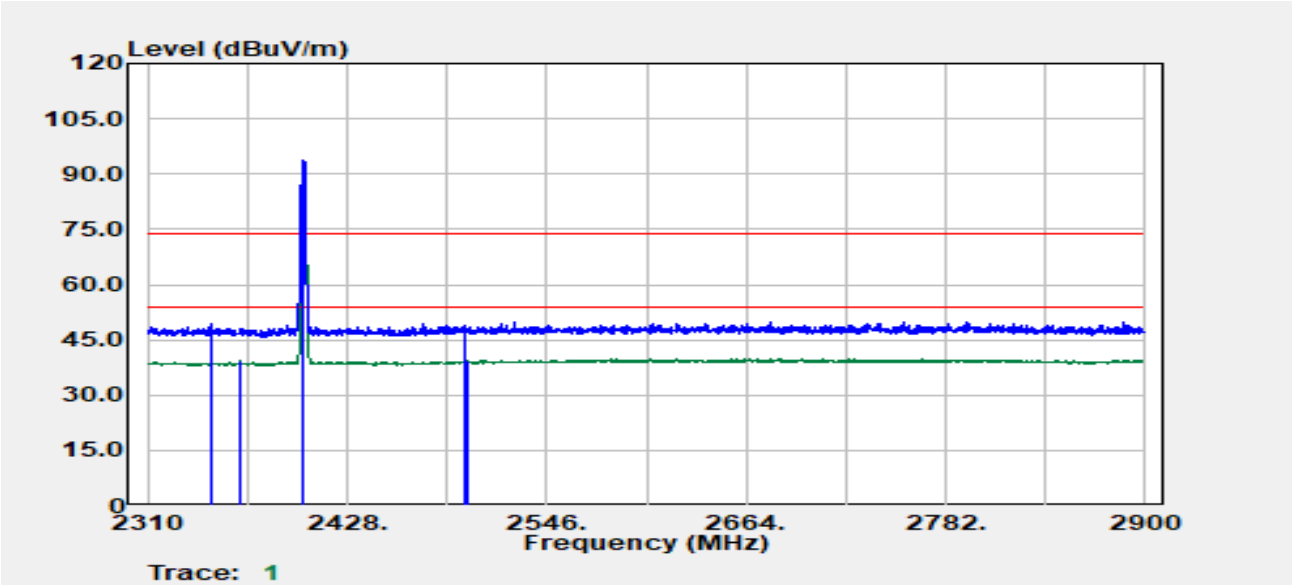
Above 1 GHz



4.3.4 Test Result

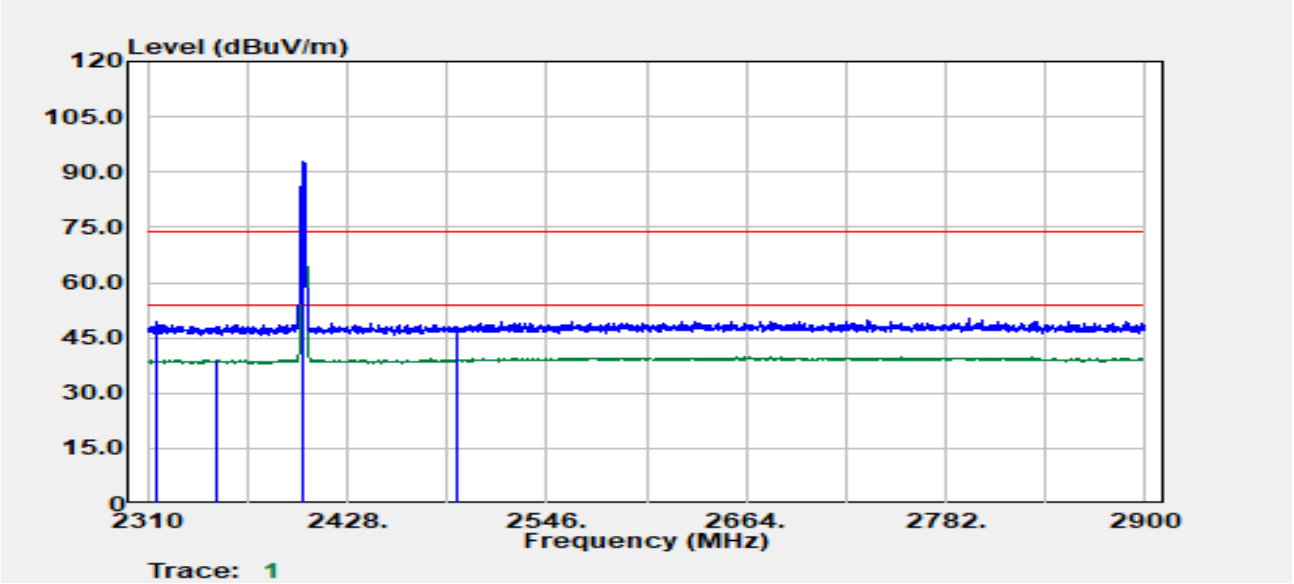
Band Edge Test Data

Project No	:TM-2311000354P	Test Date	:2024-02-26
Operation Band	:BLE_1M	Temp./Humi.	:24.4/58
Frequency	:2402 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:Bandedge	Engineer	:Tony Chao
EUT Pol	:H	Test Chamber	: 966A
Setting	:		



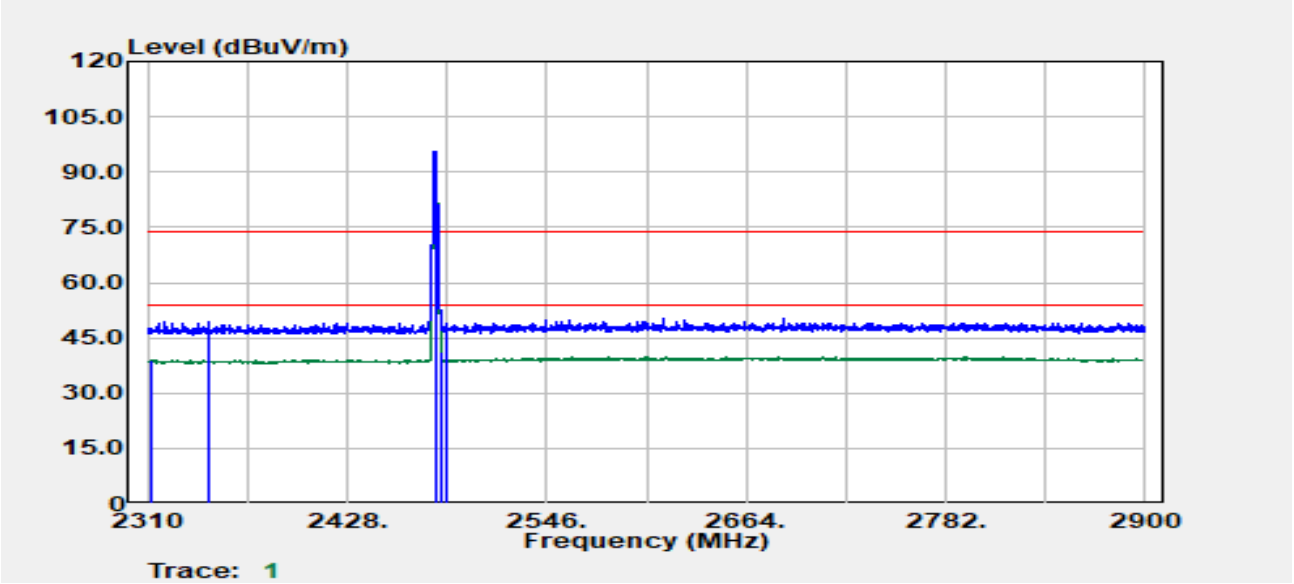
Freq.	Detector Mode	Spectrum Read Level	Factor	Actual FS	Limit	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
2347.02	Peak	43.12	6.20	49.32	74.00	-24.68
2364.27	Average	32.98	6.21	39.19	54.00	-14.81
2402.00	Peak	87.30	6.29	93.59	--	--
2402.00	Average	87.06	6.29	93.35	--	--
2497.83	Peak	41.90	6.83	48.73	74.00	-25.27
2498.58	Average	32.34	6.83	39.17	54.00	-14.83

Project No	:TM-2311000354P	Test Date	:2024-02-26
Operation Band	:BLE_1M	Temp./Humi.	:24.4/58
Frequency	:2402 MHz	Antenna Pol.	:HORIZONTAL
Operation Mode	:Bandedge	Engineer	:Tony Chao
EUT Pol	:H	Test Chamber	: 966A
Setting	:		



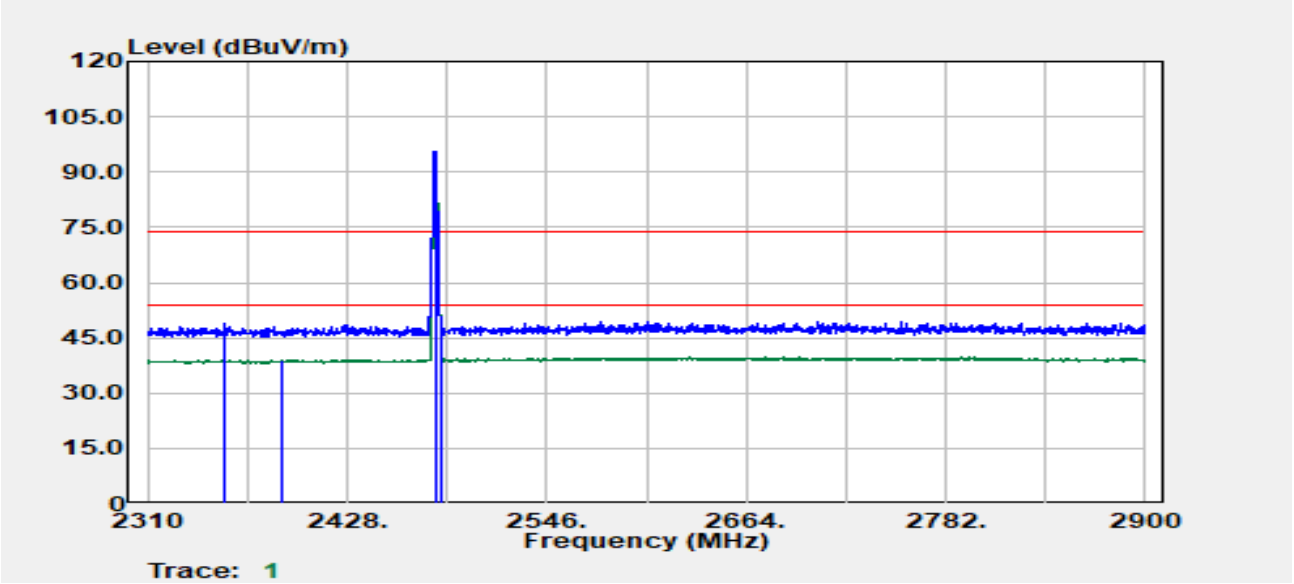
Freq.	Detector Mode	Spectrum Read Level	Factor	Actual FS	Limit	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
2315.75	Peak	43.14	6.14	49.28	74.00	-24.72
2351.52	Average	32.74	6.24	38.98	54.00	-15.02
2402.00	Peak	86.37	6.29	92.66	--	--
2402.00	Average	86.15	6.29	92.44	--	--
2493.33	Peak	41.41	6.82	48.22	74.00	-25.78
2493.33	Average	32.32	6.82	39.13	54.00	-14.87

Project No	:TM-2311000354P	Test Date	:2024-02-26
Operation Band	:BLE_1M	Temp./Humi.	:24.4/58
Frequency	:2480 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:Bandedge	Engineer	:Tony Chao
EUT Pol	:H	Test Chamber	: 966A
Setting	:		



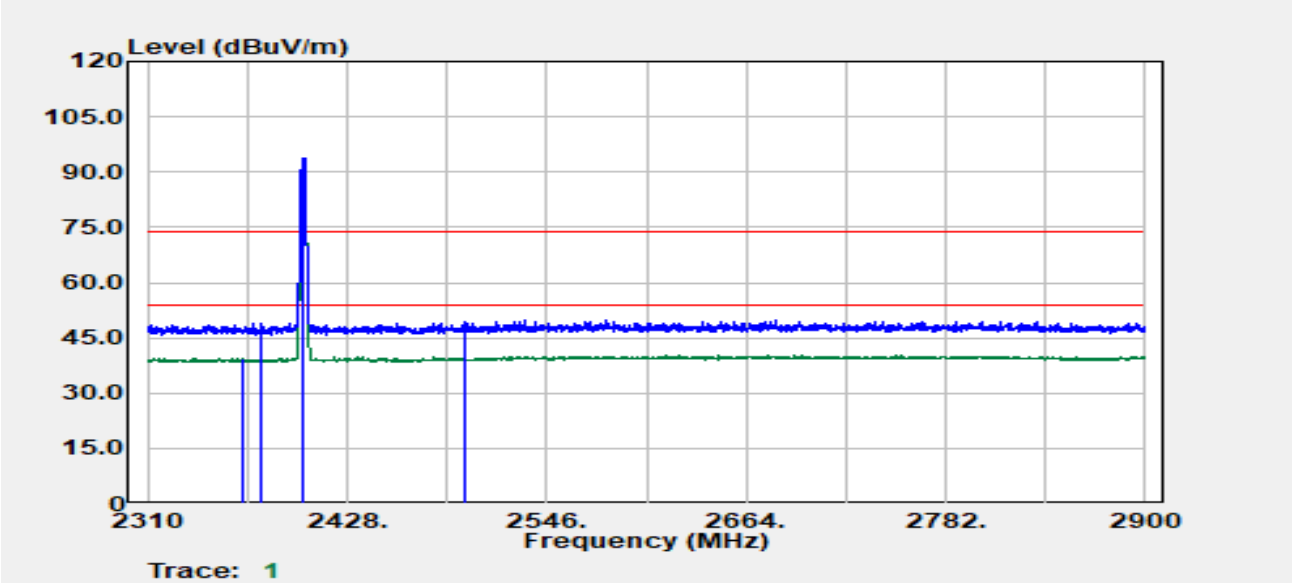
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dBµV	Factor dB	Actual FS dBµV/m	Limit dBµV/m	Margin dB
2312.75	Average	32.86	6.14	39.00	54.00	-15.00
2346.02	Peak	43.14	6.19	49.33	74.00	-24.67
2480.00	Peak	88.88	6.67	95.55	--	--
2480.00	Average	88.68	6.67	95.34	--	--
2483.57	Average	34.66	6.72	41.37	54.00	-12.63
2487.08	Peak	42.21	6.76	48.97	74.00	-25.03

Project No	:TM-2311000354P	Test Date	:2024-02-26
Operation Band	:BLE_1M	Temp./Humi.	:24.4/58
Frequency	:2480 MHz	Antenna Pol.	:HORIZONTAL
Operation Mode	:Bandedge	Engineer	:Tony Chao
EUT Pol	:H	Test Chamber	: 966A
Setting	:		



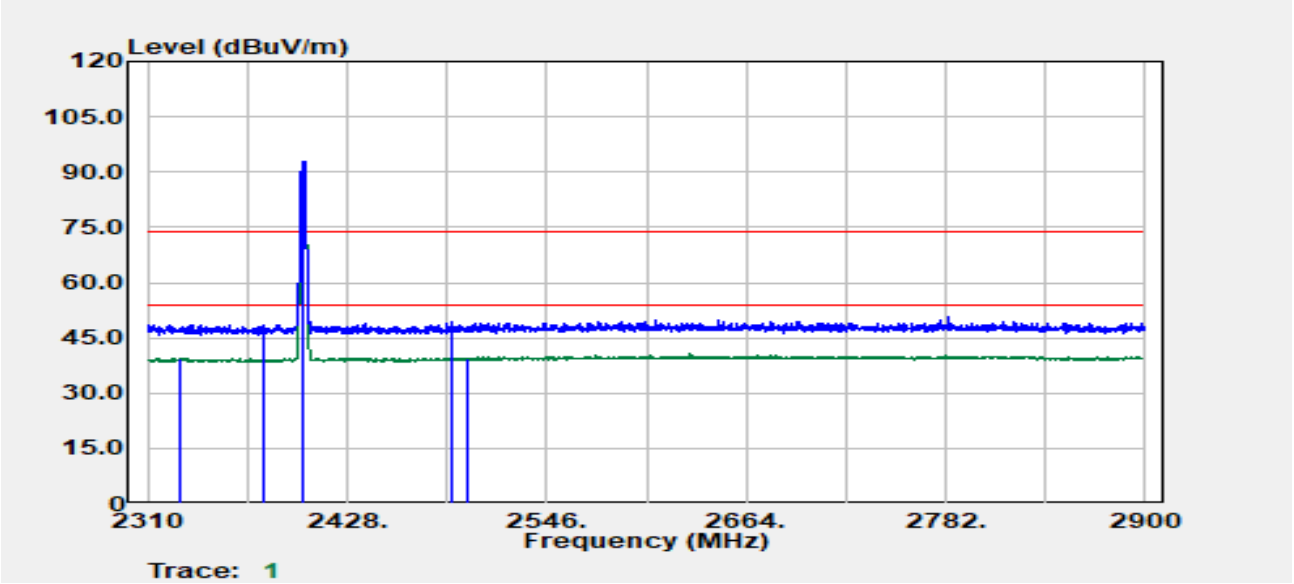
Freq.	Detector Mode	Spectrum Read Level	Factor	Actual FS	Limit	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
2355.77	Peak	42.59	6.25	48.84	74.00	-25.16
2389.03	Average	32.63	6.26	38.89	54.00	-15.11
2480.00	Peak	88.93	6.67	95.60	--	--
2480.00	Average	88.72	6.67	95.39	--	--
2483.50	Peak	41.47	6.71	48.18	74.00	-25.82
2483.57	Average	34.91	6.72	41.63	54.00	-12.37

Project No	:TM-2311000354P	Test Date	:2024-02-26
Operation Band	:BLE_2M	Temp./Humi.	:24.4/58
Frequency	:2402 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:Bandedge	Engineer	:Tony Chao
EUT Pol	:H	Test Chamber	: 966A
Setting	:		



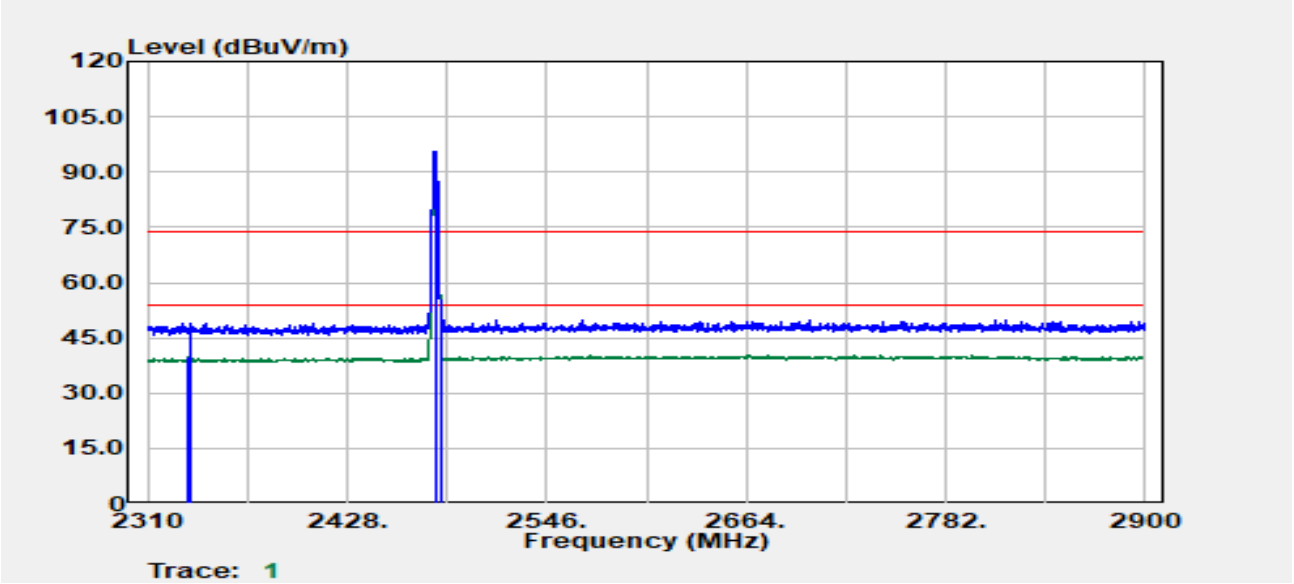
Freq.	Detector Mode	Spectrum Read Level	Factor	Actual FS	Limit	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
2365.77	Average	33.29	6.20	39.49	54.00	-14.51
2377.53	Peak	42.78	6.09	48.87	74.00	-25.13
2402.00	Peak	87.42	6.29	93.71	--	--
2402.00	Average	86.25	6.29	92.54	--	--
2496.83	Peak	42.57	6.83	49.40	74.00	-24.60
2498.08	Average	32.84	6.83	39.67	54.00	-14.33

Project No	:TM-2311000354P	Test Date	:2024-02-26
Operation Band	:BLE_2M	Temp./Humi.	:24.4/58
Frequency	:2402 MHz	Antenna Pol.	:HORIZONTAL
Operation Mode	:Bandedge	Engineer	:Tony Chao
EUT Pol	:H	Test Chamber	: 966A
Setting	:		



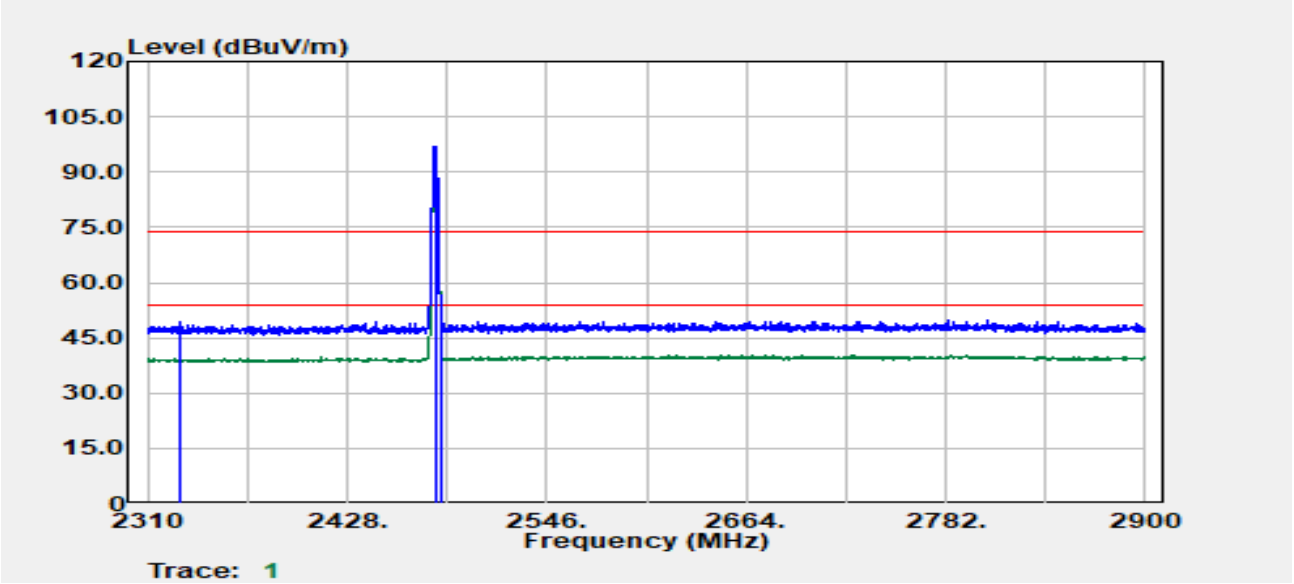
Freq.	Detector Mode	Spectrum Read Level	Factor	Actual FS	Limit	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
2329.76	Average	33.21	6.18	39.39	54.00	-14.61
2378.03	Peak	42.48	6.09	48.57	74.00	-25.43
2402.00	Peak	86.63	6.29	92.93	--	--
2402.00	Average	85.50	6.29	91.79	--	--
2489.58	Peak	42.40	6.80	49.20	74.00	-24.80
2499.08	Average	32.71	6.84	39.55	54.00	-14.45

Project No	:TM-2311000354P	Test Date	:2024-02-26
Operation Band	:BLE_2M	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
2333.26	Average	33.49	6.16	39.65	54.00	-14.35
2336.01	Peak	42.85	6.14	48.99	74.00	-25.01
2480.00	Peak	89.08	6.67	95.75	--	--
2480.00	Average	87.98	6.67	94.64	--	--
2483.57	Peak	44.56	6.72	51.28	74.00	-22.72
2483.57	Average	38.19	6.72	44.90	54.00	-9.10

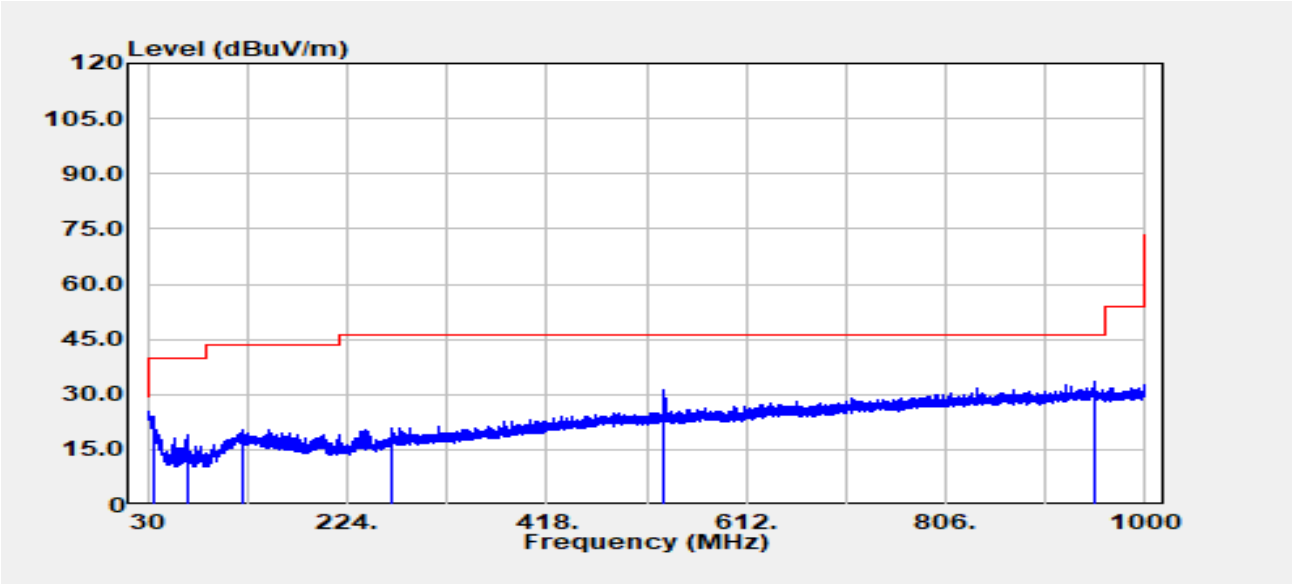
Project No	:TM-2311000354P	Test Date	:2024-02-26
Operation Band	:BLE_2M	Temp./Humi.	:24.4/58
Frequency	:2480 MHz	Antenna Pol.	:HORIZONTAL
Operation Mode	:Bandedge	Engineer	:Tony Chao
EUT Pol	:H	Test Chamber	: 966A
Setting	:		



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dBµV	Factor dB	Actual FS dBµV/m	Limit dBµV/m	Margin dB
2328.51	Average	33.37	6.18	39.55	54.00	-14.45
2329.26	Peak	43.03	6.18	49.22	74.00	-24.78
2480.00	Peak	90.05	6.67	96.71	--	--
2480.00	Average	88.94	6.67	95.60	--	--
2483.57	Average	38.98	6.72	45.69	54.00	-8.31
2483.82	Peak	45.18	6.72	51.90	74.00	-22.10

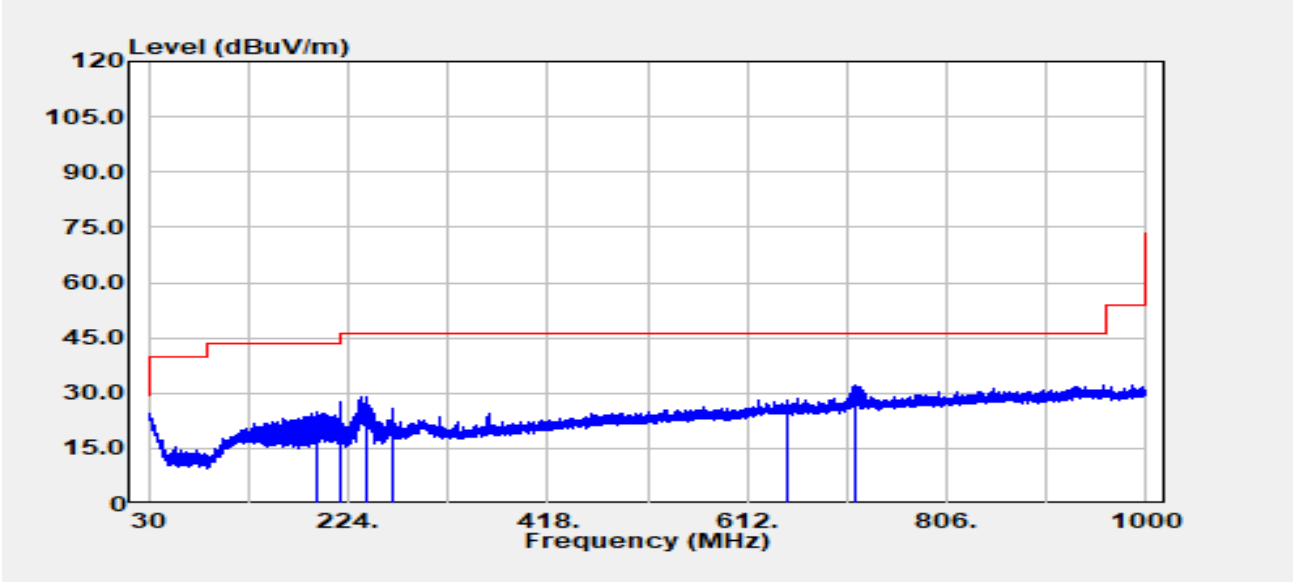
TX Test Data

Project No	:TM-2311000354P	Test Date	:2024-02-27
Operation Band	:BLE_2M	Temp./Humi.	:24.4/58
Frequency	:2480 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:TX	Engineer	:Ray Li
EUT Pol	:H	Test Chamber	: 966A
Setting	:		



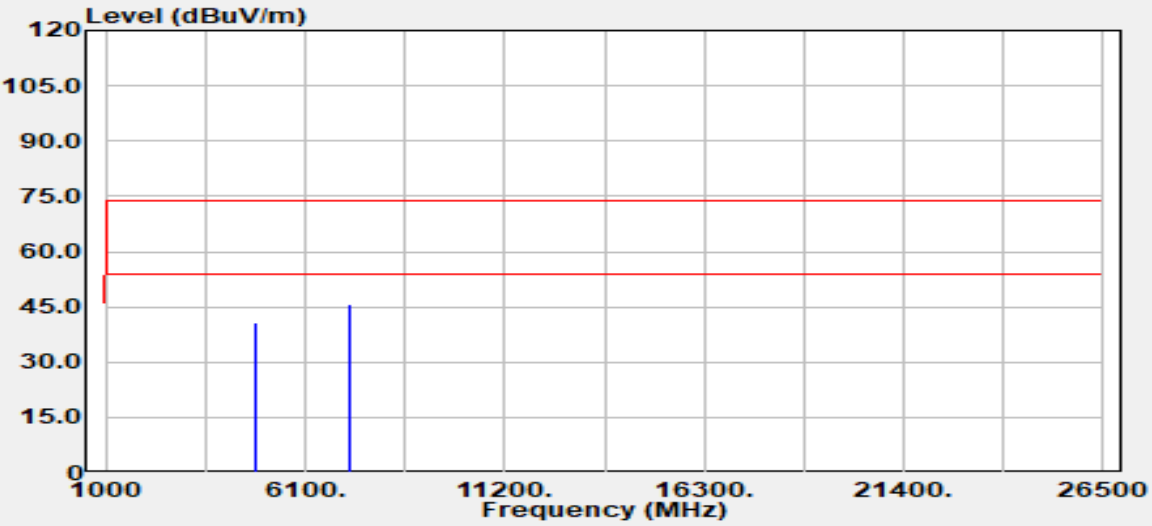
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dBµV	Factor dB	Actual FS dBµV/m	Limit dBµV/m	Margin dB
35.60	Peak	30.32	-6.54	23.78	40.00	-16.22
67.80	Peak	34.01	-15.03	18.98	40.00	-21.02
123.40	Peak	29.36	-9.05	20.31	43.50	-23.19
266.60	Peak	30.02	-9.29	20.73	46.00	-25.27
532.60	Peak	34.23	-2.95	31.28	46.00	-14.72
950.80	Peak	29.62	3.78	33.39	46.00	-12.61

Project No	:TM-2311000354P	Test Date	:2024-02-27
Operation Band	:BLE_2M	Temp./Humi.	:24.4/58
Frequency	:2480 MHz	Antenna Pol.	:HORIZONTAL
Operation Mode	:TX	Engineer	:Ray Li
EUT Pol	:H	Test Chamber	: 966A
Setting	:		



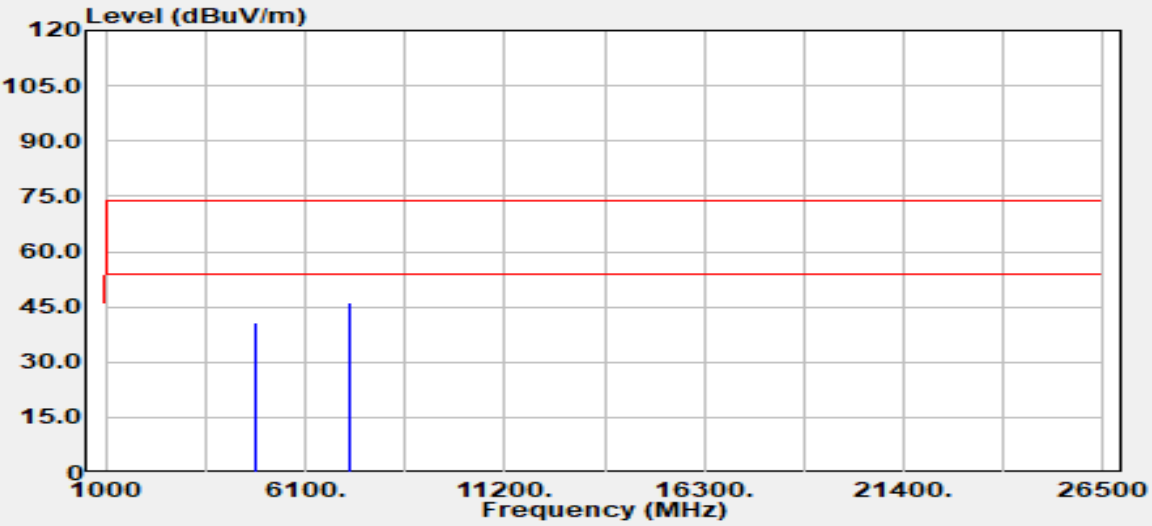
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dBµV	Factor dB	Actual FS dBµV/m	Limit dBµV/m	Margin dB
193.40	Peak	35.62	-10.92	24.70	43.50	-18.80
216.00	Peak	39.48	-11.79	27.69	43.50	-15.81
242.20	Peak	39.66	-10.62	29.04	46.00	-16.96
266.70	Peak	35.10	-9.28	25.82	46.00	-20.18
651.30	Peak	28.68	-0.71	27.97	46.00	-18.03
717.80	Peak	31.70	0.35	32.05	46.00	-13.95

Project No	:TM-2311000354P	Test Date	:2024-02-26
Operation Band	:BLE_1M	Temp./Humi.	:24.4/58
Frequency	:2402 MHz	Antenna Pol.	:Vertical
Operation Mode	:TX	Engineer	:Ray Li
EUT Pol	:H	Test Chamber	: 966A
Setting	:		



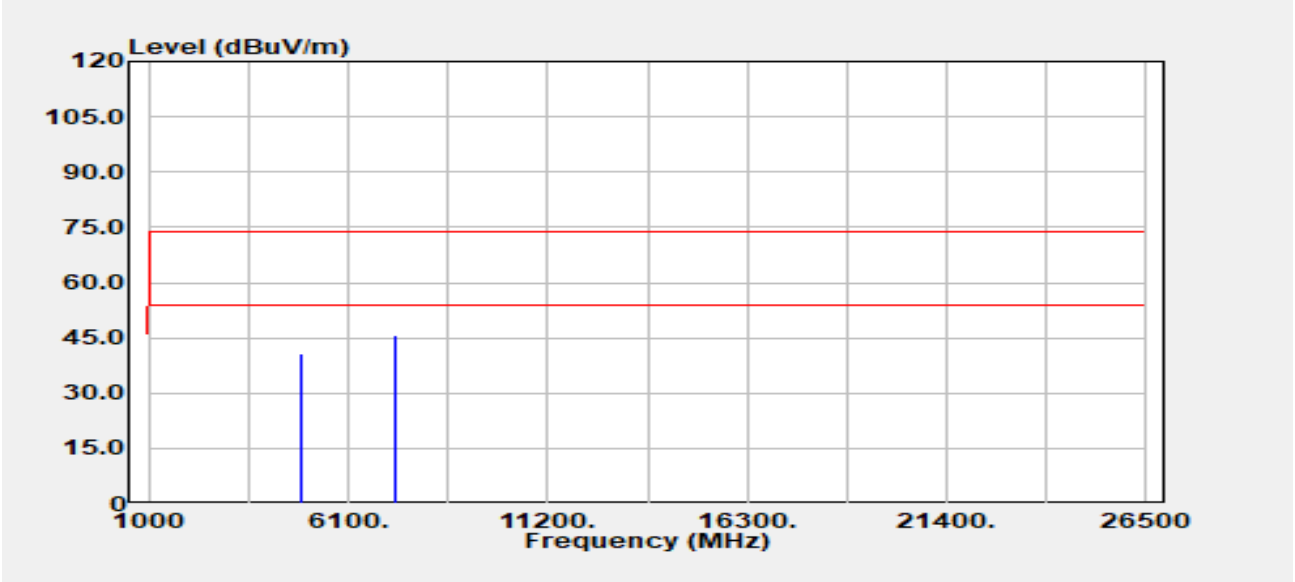
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dBµV	Factor dB	Actual FS dBµV/m	Limit dBµV/m	Margin dB
4804.00	Peak	38.73	2.23	40.96	74.00	-33.04
4804.00	Average	29.66	2.23	31.88	54.00	-22.12
7206.00	Peak	36.61	9.01	45.62	74.00	-28.38
7206.00	Average	27.91	9.01	36.92	54.00	-17.08

Project No	:TM-2311000354P	Test Date	:2024-02-26
Operation Band	:BLE_1M	Temp./Humi.	:24.4/58
Frequency	:2402 MHz	Antenna Pol.	:Horizontal
Operation Mode	:TX	Engineer	:Ray Li
EUT Pol	:H	Test Chamber	: 966A
Setting	:		



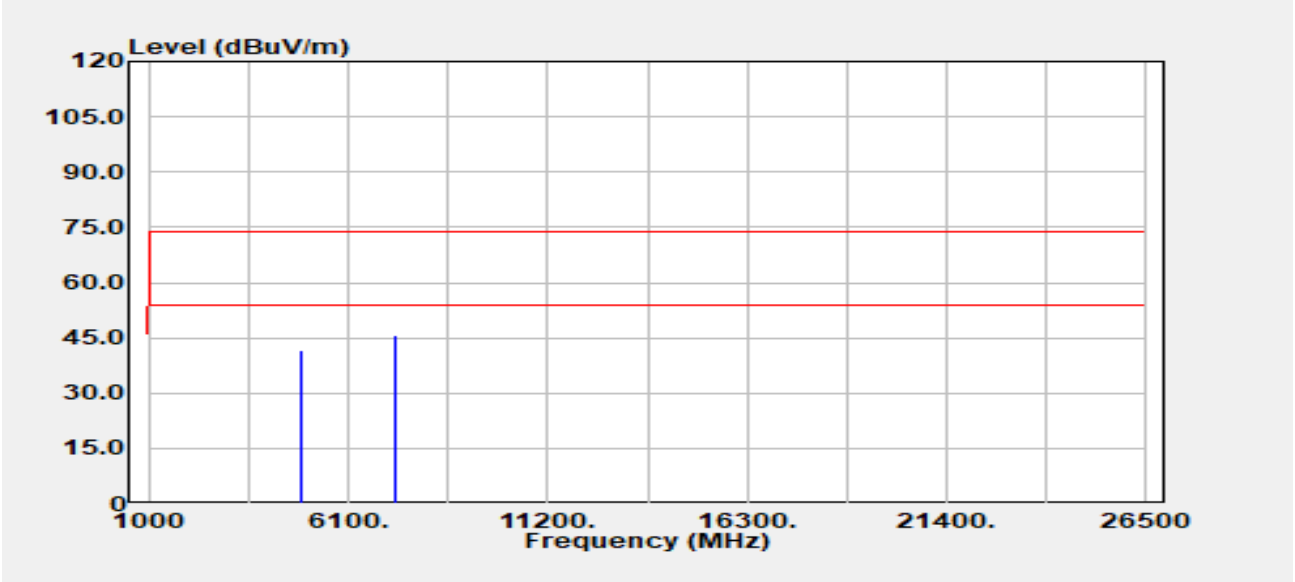
Freq.	Detector Mode	Spectrum Read Level	Factor	Actual FS	Limit	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
4804.00	Peak	38.48	2.23	40.70	74.00	-33.30
4804.00	Average	30.95	2.23	33.18	54.00	-20.82
7206.00	Peak	36.96	9.01	45.97	74.00	-28.03
7206.00	Average	27.71	9.01	36.72	54.00	-17.28

Project No	:TM-2311000354P	Test Date	:2024-02-26
Operation Band	:BLE_1M	Temp./Humi.	:24.4/58
Frequency	:2440 MHz	Antenna Pol.	:Vertical
Operation Mode	:TX	Engineer	:Ray Li
EUT Pol	:H	Test Chamber	: 966A
Setting	:		



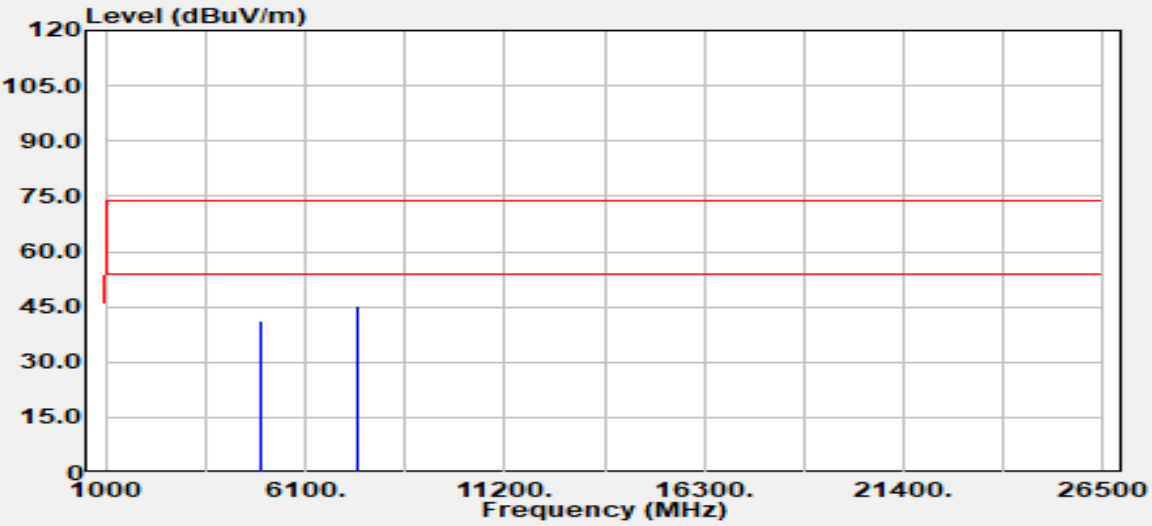
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dBµV	Factor dB	Actual FS dBµV/m	Limit dBµV/m	Margin dB
4880.00	Peak	38.09	2.55	40.63	74.00	-33.37
4880.00	Average	29.60	2.55	32.14	54.00	-21.86
7320.00	Peak	36.55	8.96	45.51	74.00	-28.49
7320.00	Average	27.90	8.96	36.86	54.00	-17.14

Project No	:TM-2311000354P	Test Date	:2024-02-26
Operation Band	:BLE_1M	Temp./Humi.	:24.4/58
Frequency	:2440 MHz	Antenna Pol.	:Horizontal
Operation Mode	:TX	Engineer	:Ray Li
EUT Pol	:H	Test Chamber	: 966A
Setting	:		



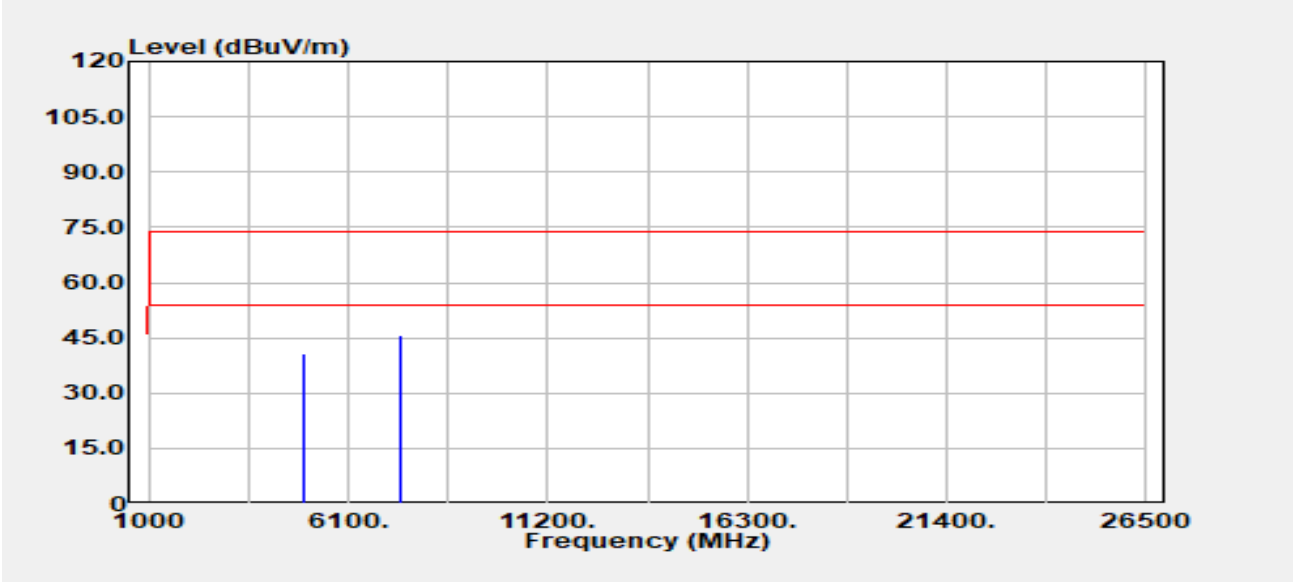
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dBµV	Factor dB	Actual FS dBµV/m	Limit dBµV/m	Margin dB
4880.00	Peak	39.09	2.55	41.63	74.00	-32.37
4880.00	Average	31.11	2.55	33.66	54.00	-20.34
7320.00	Peak	36.62	8.96	45.57	74.00	-28.43
7320.00	Average	27.88	8.96	36.83	54.00	-17.17

Project No	:TM-2311000354P	Test Date	:2024-02-26
Operation Band	:BLE_1M	Temp./Humi.	:24.4/58
Frequency	:2480 MHz	Antenna Pol.	:Vertical
Operation Mode	:TX	Engineer	:Ray Li
EUT Pol	:H	Test Chamber	: 966A
Setting	:		



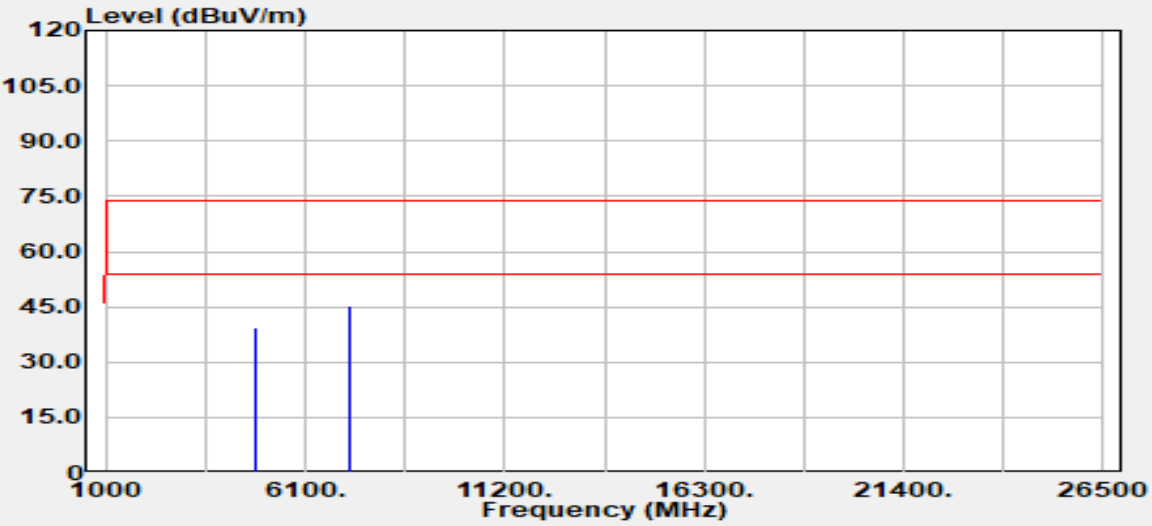
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dBµV	Factor dB	Actual FS dBµV/m	Limit dBµV/m	Margin dB
4960.00	Peak	37.82	3.21	41.03	74.00	-32.97
4960.00	Average	29.92	3.21	33.13	54.00	-20.87
7440.00	Peak	36.37	8.92	45.29	74.00	-28.71
7440.00	Average	27.63	8.92	36.55	54.00	-17.45

Project No	:TM-2311000354P	Test Date	:2024-02-26
Operation Band	:BLE_1M	Temp./Humi.	:24.4/58
Frequency	:2480 MHz	Antenna Pol.	:Horizontal
Operation Mode	:TX	Engineer	:Ray Li
EUT Pol	:H	Test Chamber	: 966A
Setting	:		



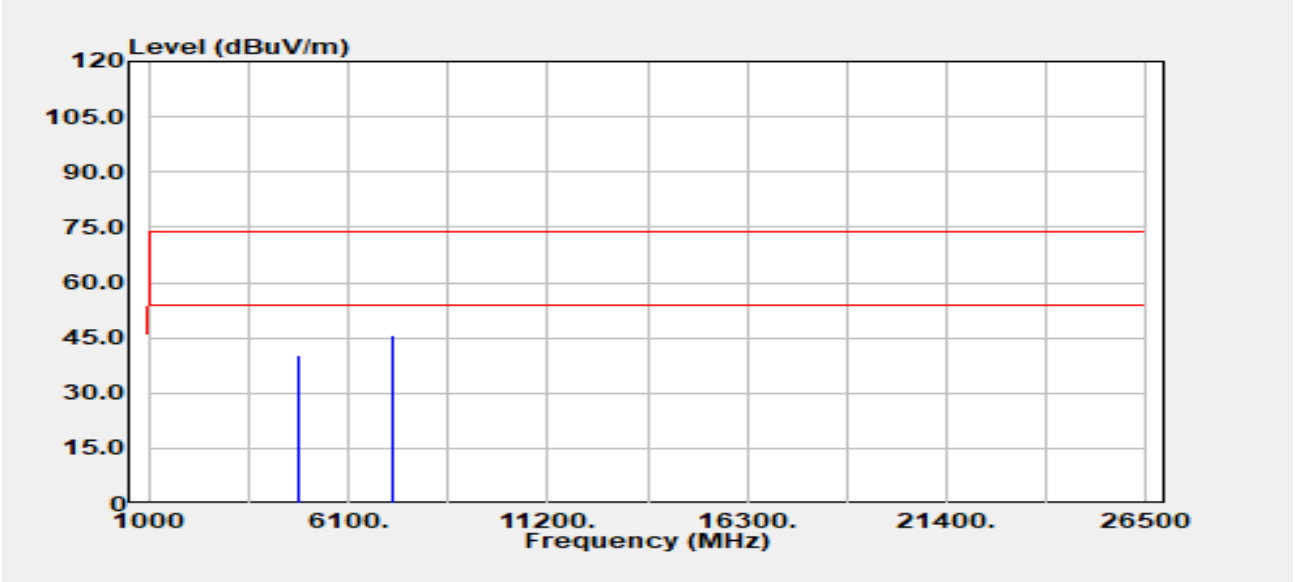
Freq.	Detector Mode	Spectrum Read Level	Factor	Actual FS	Limit	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
4960.00	Peak	37.66	3.21	40.87	74.00	-33.13
4960.00	Average	32.37	3.21	35.59	54.00	-18.41
7440.00	Peak	36.81	8.92	45.73	74.00	-28.27
7440.00	Average	27.52	8.92	36.44	54.00	-17.56

Project No	:TM-2311000354P	Test Date	:2024-02-26
Operation Band	:BLE_2M	Temp./Humi.	:24.4/58
Frequency	:2402 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:TX	Engineer	:Tony Chao
EUT Pol	:H	Test Chamber	: 966A
Setting	:		



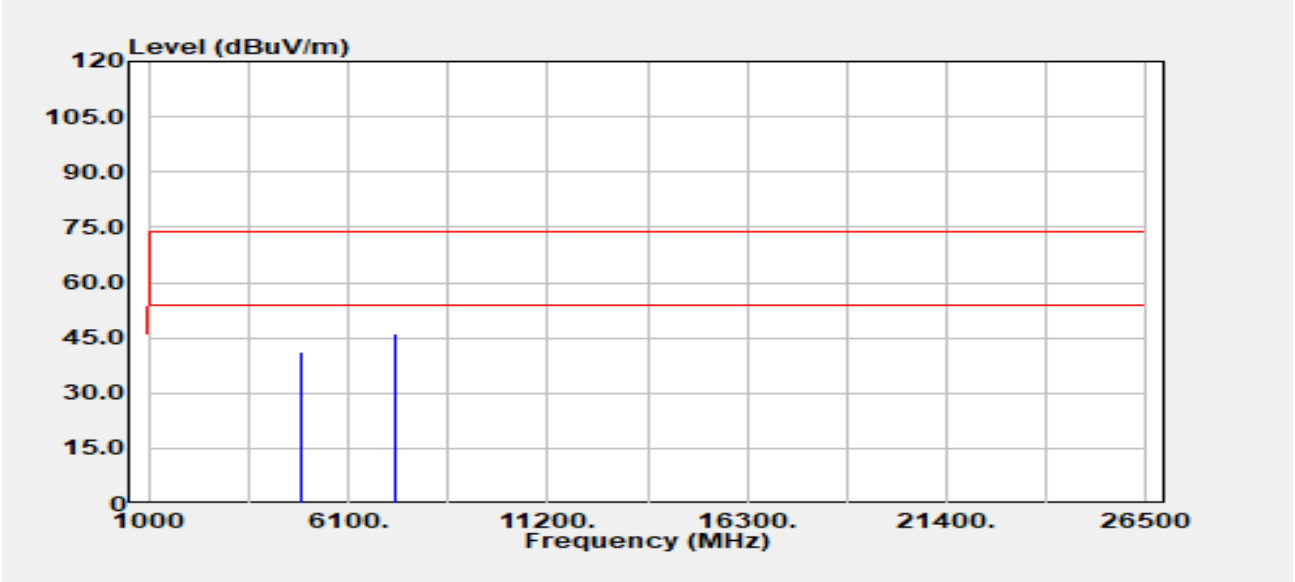
Freq.	Detector Mode	Spectrum Read Level	Factor	Actual FS	Limit	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
4804.00	Peak	37.06	2.23	39.28	74.00	-34.72
4804.00	Average	29.90	2.23	32.13	54.00	-21.87
7206.00	Peak	36.24	9.01	45.25	74.00	-28.75
7206.00	Average	27.96	9.01	36.97	54.00	-17.03

Project No	:TM-2311000354P	Test Date	:2024-02-26
Operation Band	:BLE_2M	Temp./Humi.	:24.4/58
Frequency	:2402 MHz	Antenna Pol.	:Horizontal
Operation Mode	:TX	Engineer	:Ray Li
EUT Pol	:H	Test Chamber	: 966A
Setting	:		



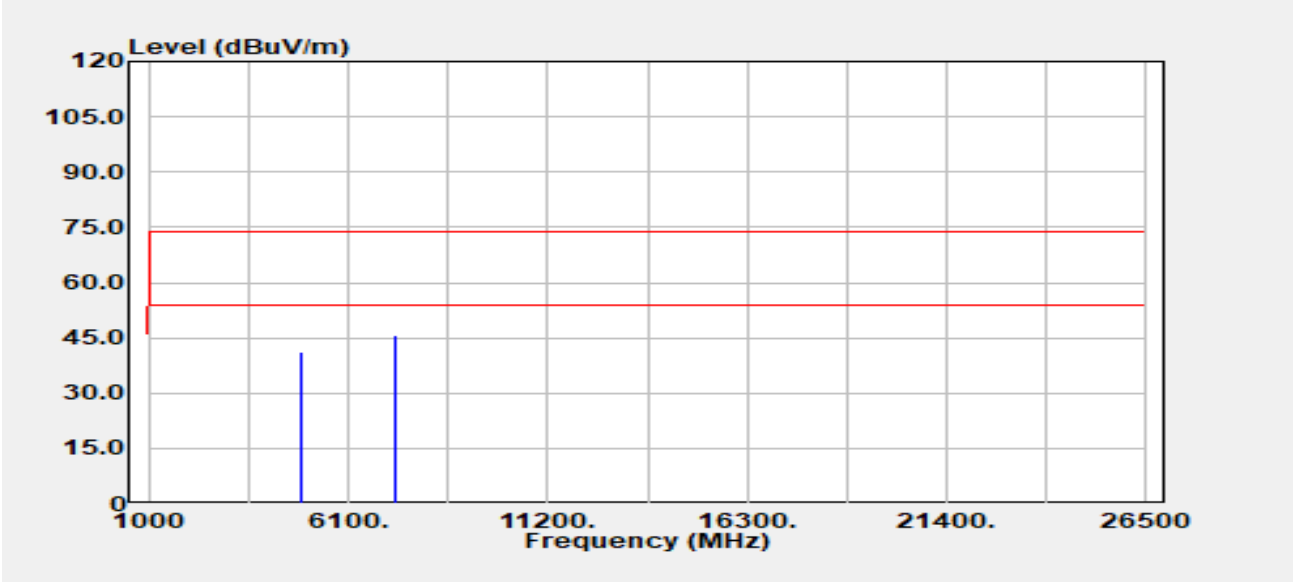
Freq.	Detector Mode	Spectrum Read Level	Factor	Actual FS	Limit	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
4804.00	Peak	37.93	2.23	40.16	74.00	-33.84
4804.00	Average	30.26	2.23	32.49	54.00	-21.51
7206.00	Peak	36.85	9.01	45.86	74.00	-28.14
7206.00	Average	28.41	9.01	37.42	54.00	-16.58

Project No	:TM-2311000354P	Test Date	:2024-02-26
Operation Band	:BLE_2M	Temp./Humi.	:24.4/58
Frequency	:2440 MHz	Antenna Pol.	:Vertical
Operation Mode	:TX	Engineer	:Ray Li
EUT Pol	:H	Test Chamber	: 966A
Setting	:		



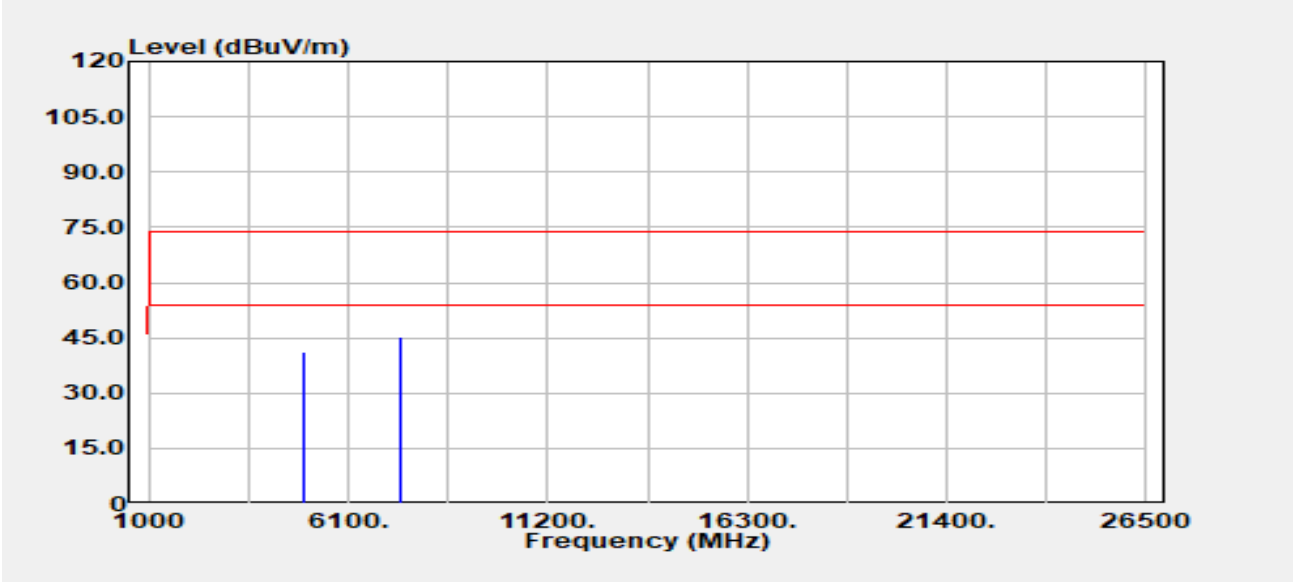
Freq.	Detector Mode	Spectrum Read Level	Factor	Actual FS	Limit	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
4880.00	Peak	38.71	2.55	41.26	74.00	-32.74
4880.00	Average	29.85	2.55	32.40	54.00	-21.60
7320.00	Peak	37.12	8.96	46.07	74.00	-27.93
7320.00	Average	28.40	8.96	37.35	54.00	-16.65

Project No	:TM-2311000354P	Test Date	:2024-02-26
Operation Band	:BLE_2M	Temp./Humi.	:24.4/58
Frequency	:2440 MHz	Antenna Pol.	:Horizontal
Operation Mode	:TX	Engineer	:Ray Li
EUT Pol	:H	Test Chamber	: 966A
Setting	:		



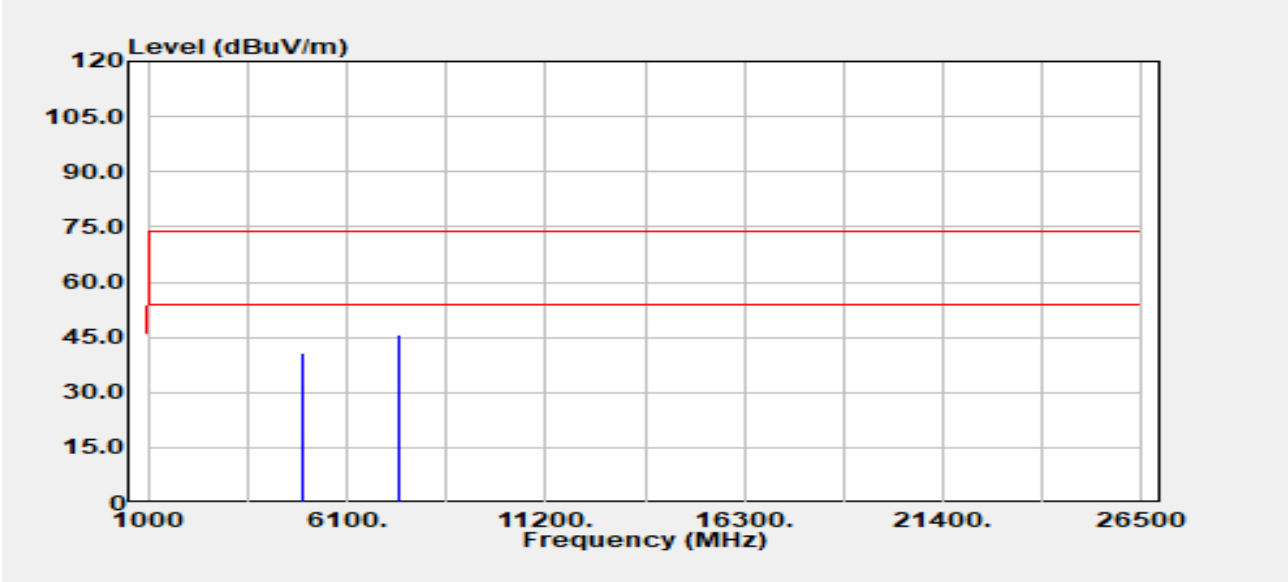
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dBµV	Factor dB	Actual FS dBµV/m	Limit dBµV/m	Margin dB
4880.00	Peak	38.61	2.55	41.16	74.00	-32.84
4880.00	Average	29.74	2.55	32.29	54.00	-21.71
7320.00	Peak	36.75	8.96	45.71	74.00	-28.29
7320.00	Average	28.28	8.96	37.24	54.00	-16.76

Project No	:TM-2311000354P	Test Date	:2024-02-26
Operation Band	:BLE_2M	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 dBµV	Factor dB	Actual FS dBµV/m	Limit dBµV/m	Margin dB
4960.00	Peak	38.15	3.21	41.36	74.00	-32.64
4960.00	Average	29.21	3.21	32.42	54.00	-21.58
7440.00	Peak	36.51	8.92	45.43	74.00	-28.57
7440.00	Average	28.46	8.92	37.38	54.00	-16.62

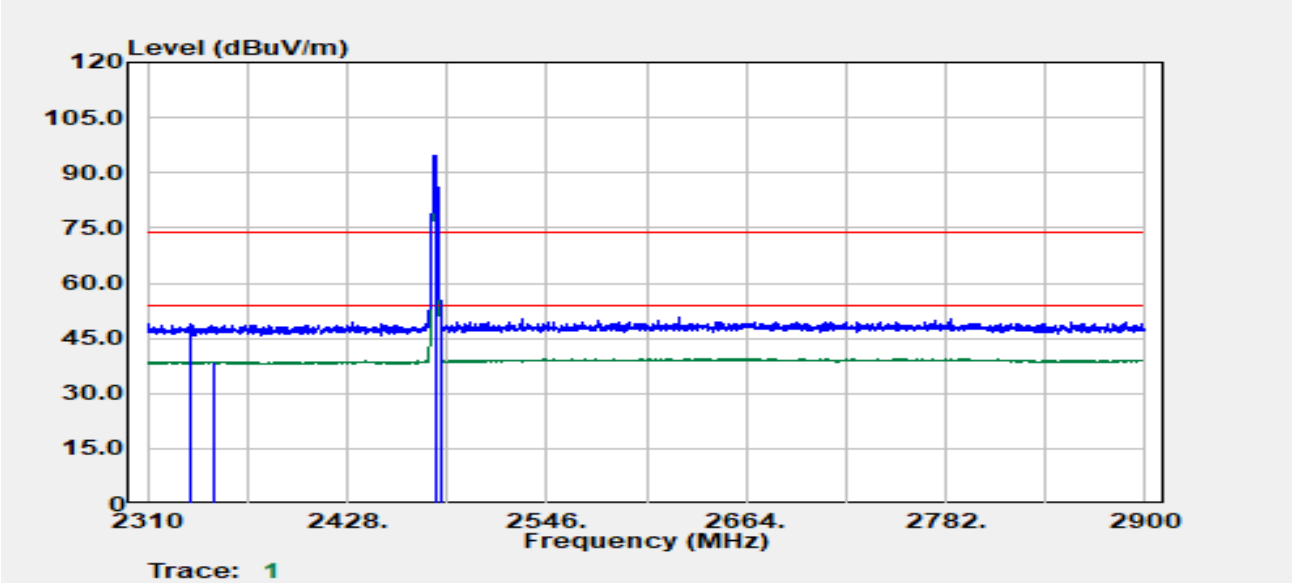
Project No	:TM-2311000354P	Test Date	:2024-02-26
Operation Band	:BLE_2M	Temp./Humi.	:24.4/58
Frequency	:2480 MHz	Antenna Pol.	:Horizontal
Operation Mode	:TX	Engineer	:Ray Li
EUT Pol	:H	Test Chamber	: 966A
Setting	:		



Freq.	Detector Mode	Spectrum Read Level	Factor	Actual FS	Limit	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
4960.00	Peak	37.72	3.21	40.93	74.00	-33.07
4960.00	Average	32.35	3.21	35.56	54.00	-18.44
7440.00	Peak	36.95	8.92	45.87	74.00	-28.13
7440.00	Average	28.20	8.92	37.12	54.00	-16.88

Co-location

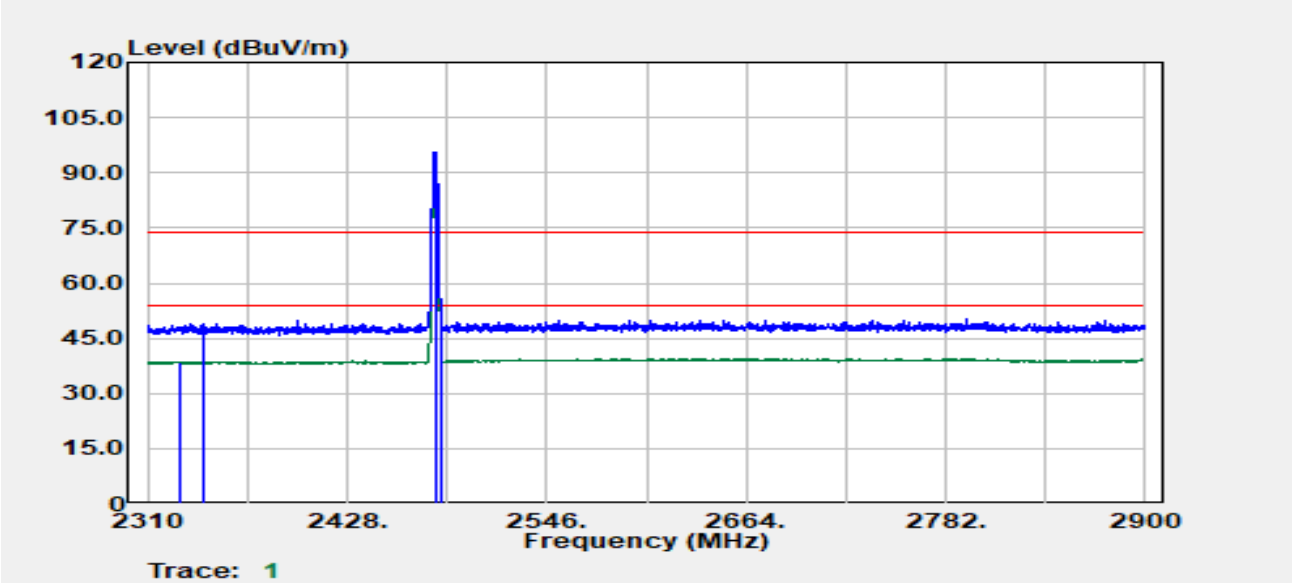
Project No	:TM-2311000354P	Test Date	:2024-04-10
Operation Band	:NFC_BLE 2M_LTE Band2 QPSK1,0_20M	Temp./Humi.	:24.3/60
Frequency	:2480 MHz_1871 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:Bandedge	Engineer	:Ray Li
EUT Pol	:H	Test Chamber	: 966A
Setting	:		



Freq.	Detector Mode	Spectrum Read Level	Factor	Actual FS	Limit	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
2334.76	Peak	43.49	5.38	48.87	74.00	-25.13
2349.27	Average	33.19	5.46	38.65	54.00	-15.35
2480.00	Peak	88.93	5.89	94.83	--	--
2480.00	Average	86.48	5.89	92.37	--	--
2483.57	Peak	45.34	5.94	51.29	74.00	-22.71
2483.57	Average	35.58	5.94	41.52	54.00	-12.48

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

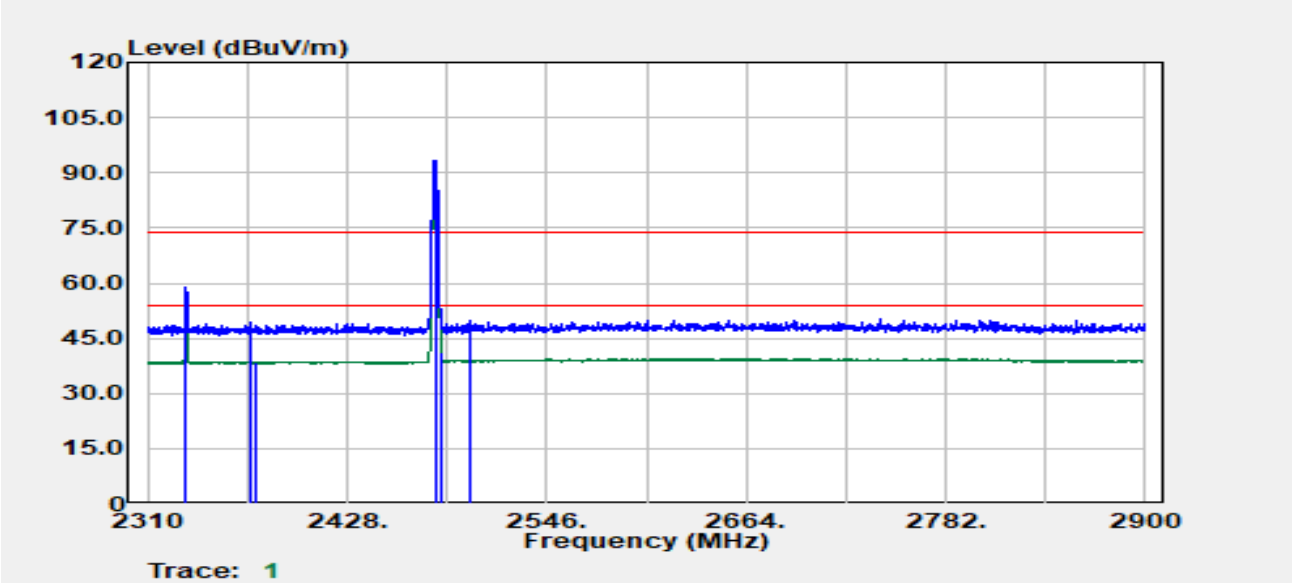
Project No	:TM-2311000354P	Test Date	:2024-04-10
Operation Band	:NFC_BLE 2M_LTE Band2 QPSK1,0_20M	Temp./Humi.	:24.3/60
Frequency	:2480 MHz_1871 MHz	Antenna Pol.	:HORIZONTAL
Operation Mode	:Bandedge	Engineer	:Ray Li
EUT Pol	:H	Test Chamber	: 966A
Setting	:		



Freq.	Detector Mode	Spectrum Read Level	Factor	Actual FS	Limit	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
2329.01	Average	33.18	5.41	38.59	54.00	-15.41
2343.01	Peak	43.51	5.38	48.89	74.00	-25.11
2480.00	Peak	89.80	5.89	95.69	--	--
2480.00	Average	87.42	5.89	93.31	--	--
2483.57	Peak	45.47	5.94	51.41	74.00	-22.59
2483.57	Average	36.37	5.94	42.31	54.00	-11.69

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

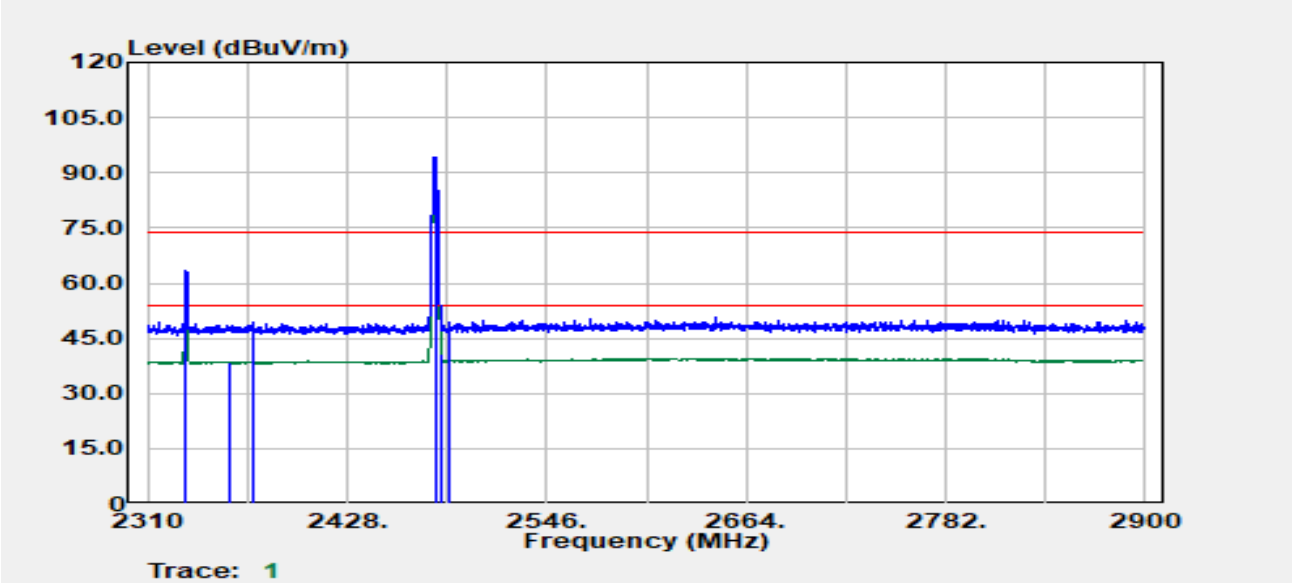
Project No	:TM-2311000354P	Test Date	:2024-04-10
Operation Band	:NFC_BLE 2M_LTE Band13 QPSK1,0_10M	Temp./Humi.	:24.3/60
Frequency	:2480 MHz_777.6 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:Bandedge	Engineer	:Ray Li
EUT Pol	:H	Test Chamber	: 966A
Setting	:		



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dBµV	Factor dB	Actual FS dBµV/m	Limit dBµV/m	Margin dB
2332.80	Peak	53.46	5.39	58.85	82.20	-23.35
2371.17	Peak	43.80	5.38	49.17	74.00	-24.83
2373.17	Average	33.30	5.36	38.66	54.00	-15.34
2480.00	Peak	87.60	5.89	93.49	--	--
2480.00	Average	85.10	5.89	90.99	--	--
2483.53	Average	35.06	5.94	41.00	54.00	-13.00
2500.01	Peak	43.65	6.07	49.72	74.00	-24.28

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

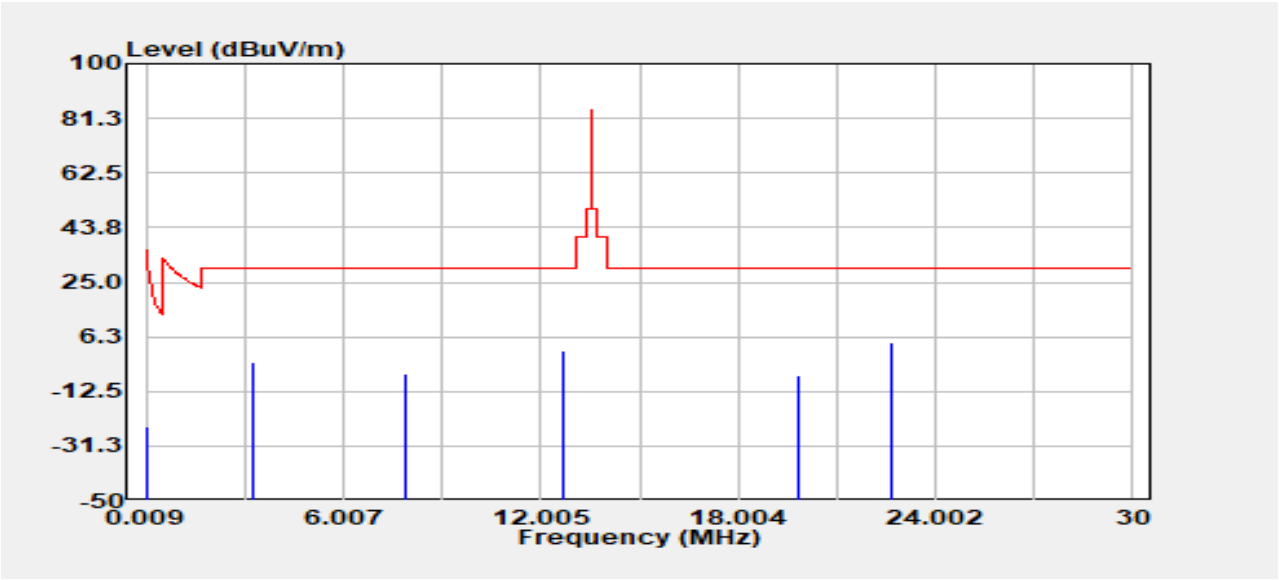
Project No	:TM-2311000354P	Test Date	:2024-04-10
Operation Band	:NFC_BLE 2M_LTE Band13 QPSK1,0_10M	Temp./Humi.	:24.3/60
Frequency	:2480 MHz_777.6 MHz	Antenna Pol.	:HORIZONTAL
Operation Mode	:Bandedge	Engineer	:Ray Li
EUT Pol	:H	Test Chamber	: 966A
Setting	:		



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dBµV	Factor dB	Actual FS dBµV/m	Limit dBµV/m	Margin dB
2332.80	Peak	58.13	5.39	63.53	82.20	-18.67
2358.27	Average	33.11	5.48	38.59	54.00	-15.41
2372.78	Peak	44.20	5.37	49.56	74.00	-24.44
2480.00	Peak	88.39	5.89	94.28	--	--
2480.00	Average	85.87	5.89	91.76	--	--
2483.57	Average	35.01	5.94	40.95	54.00	-13.05
2489.08	Peak	43.42	6.02	49.43	74.00	-24.57

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

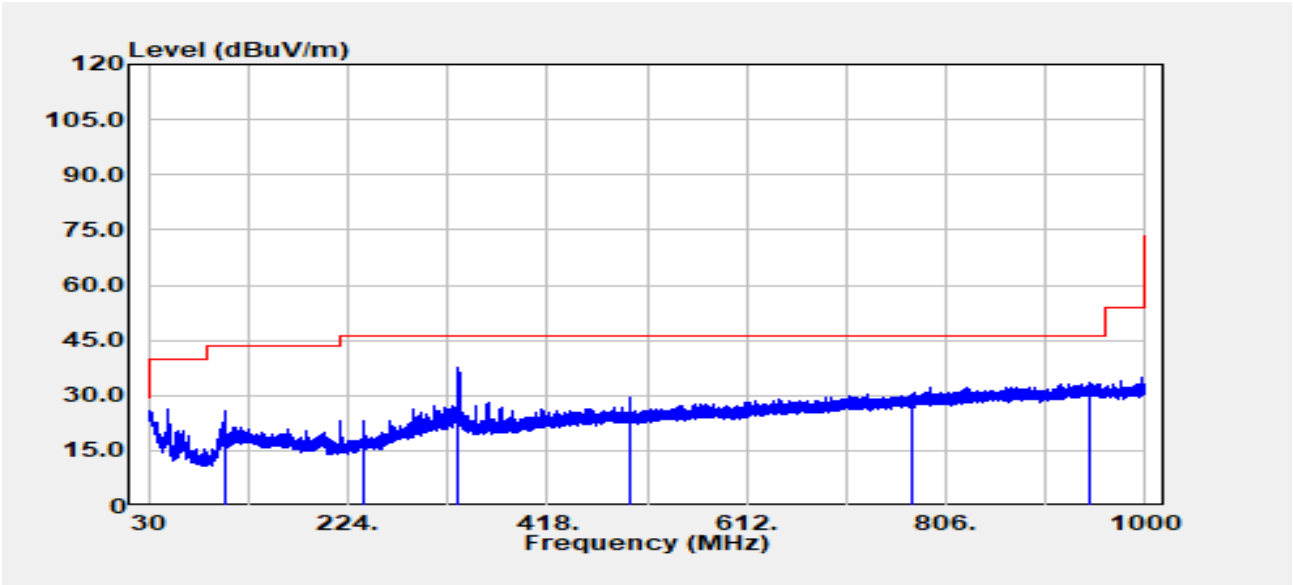
Project No	:TM-2311000354P	Test Date	:2024-04-10
Operation Band	:NFC_BLE 2M_LTE Band2 QPSK1,0 20M	Temp./Humi.	:24.4/59
Frequency	:13.56 MHz_2480 MHz_1871 MHz	Antenna Pol.	:Horizontal
Operation Mode	:TX	Engineer	:Tony Chao
EUT Pol	:H	Test Chamber	: 966A
Setting	:		



Freq.	Detector Mode	Spectrum Read Level @3m	Factor @3m	Actual FS @3m	Factor @30m&300m	Actual FS @30m&300m	Limit	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dB	dBµV/m	dBµV/m	dB
0.05	Peak	41.28	14.47	55.74	-80.00	-24.26	33.74	-58.00
3.28	Peak	22.15	15.31	37.46	-40.00	-2.54	29.54	-32.08
7.88	Peak	17.13	16.17	33.30	-40.00	-6.70	29.54	-36.24
12.72	Peak	24.60	16.84	41.44	-40.00	1.44	29.54	-28.10
19.80	Peak	15.48	17.47	32.95	-40.00	-7.05	29.54	-36.59
22.68	Peak	27.77	16.33	44.10	-40.00	4.10	29.54	-25.44

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

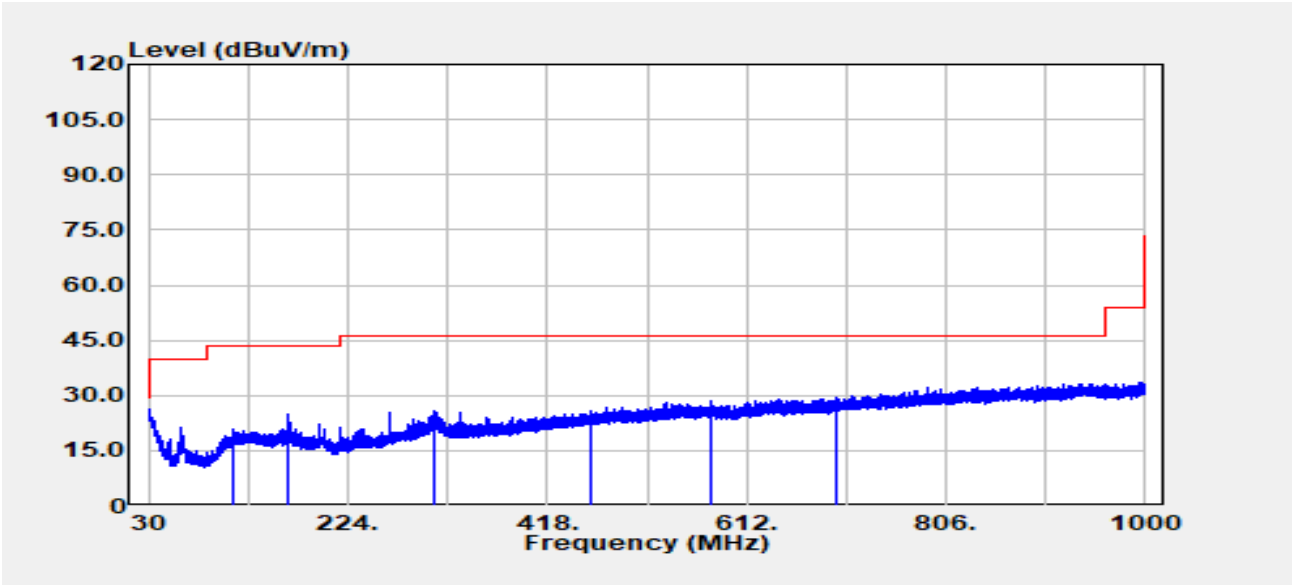
Project No	:TM-2311000354P	Test Date	:2024-04-10
Operation Band	:NFC_BLE 2M_LTE Band2 QPSK1,0 20M	Temp./Humi.	:24.4/59
Frequency	:13.56 MHz_2480 MHz_1871 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:TX	Engineer	:Tony Chao
EUT Pol	:H	Test Chamber	: 966A
Setting	:		



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.

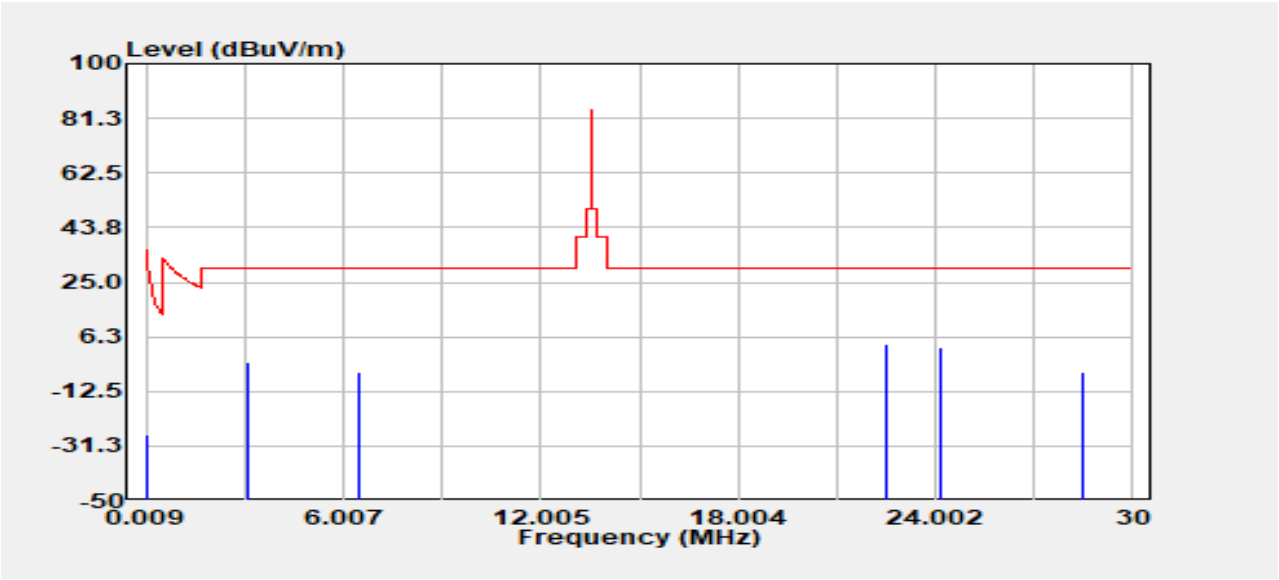
Project No	:TM-2311000354P	Test Date	:2024-04-10
Operation Band	:NFC_BLE 2M_LTE Band2 QPSK1,0 20M	Temp./Humi.	:24.4/59
Frequency	:13.56 MHz_2480 MHz_1871 MHz	Antenna Pol.	:HORIZONTAL
Operation Mode	:TX	Engineer	:Tony Chao
EUT Pol	:H	Test Chamber	: 966A
Setting	:		



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dBµV	Factor dB	Actual FS dBµV/m	Limit dBµV/m	Margin dB
112.85	Peak	30.63	-9.91	20.72	43.50	-22.78
166.24	Peak	35.69	-10.92	24.77	43.50	-18.73
308.88	Peak	34.28	-8.51	25.78	46.00	-20.22
459.49	Peak	30.12	-4.26	25.86	46.00	-20.14
577.96	Peak	30.66	-2.28	28.38	46.00	-17.62
698.15	Peak	29.49	-0.28	29.21	46.00	-16.79

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

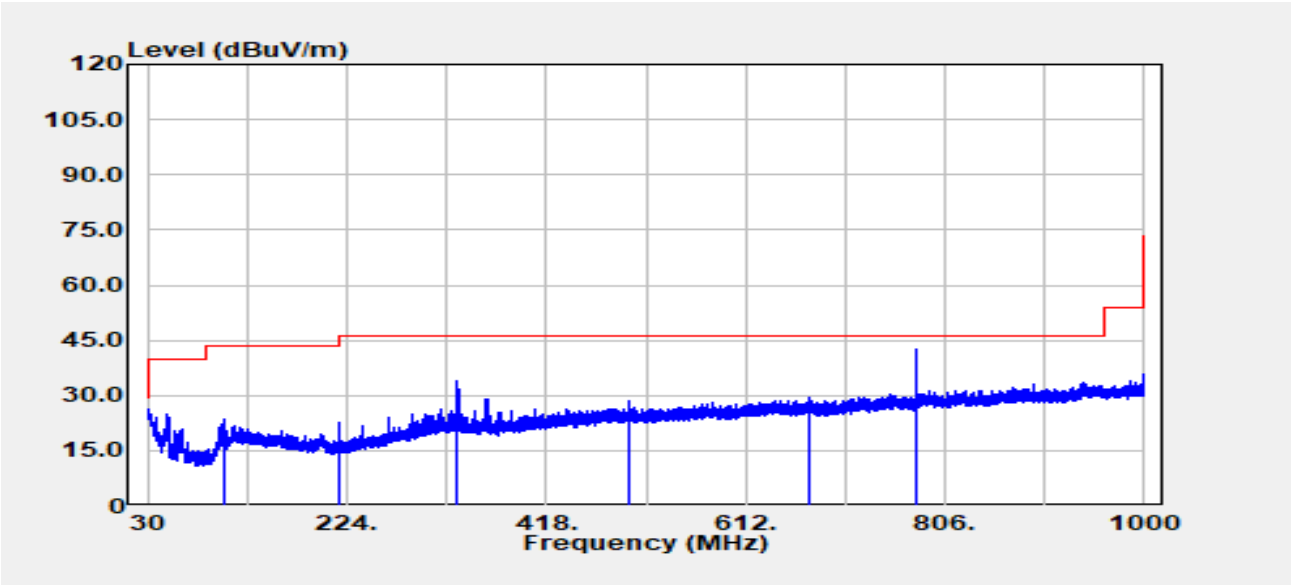
Project No	:TM-2311000354P	Test Date	:2024-04-10
Operation Band	:NFC_BLE 2M_LTE Band13 QPSK1,0 10M	Temp./Humi.	:24.4/59
Frequency	:13.56 MHz_2480 MHz_777.6 MHz	Antenna Pol.	:Horizontal
Operation Mode	:TX	Engineer	:Tony Chao
EUT Pol	:H	Test Chamber	: 966A
Setting	:		



Freq.	Detector Mode	Spectrum Read Level @3m	Factor @3m	Actual FS @3m	Factor @30m&300m	Actual FS @30m&300m	Limit	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dB	dBµV/m	dBµV/m	dB
0.07	Peak	38.57	13.90	52.47	-80.00	-27.53	31.03	-58.56
3.13	Peak	22.47	15.23	37.70	-40.00	-2.30	29.54	-31.84
6.49	Peak	17.35	16.52	33.87	-40.00	-6.13	29.54	-35.67
22.54	Peak	27.18	16.40	43.58	-40.00	3.58	29.54	-25.96
24.13	Peak	26.23	16.52	42.75	-40.00	2.75	29.54	-26.79
28.48	Peak	16.97	17.14	34.10	-40.00	-5.90	29.54	-35.44

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

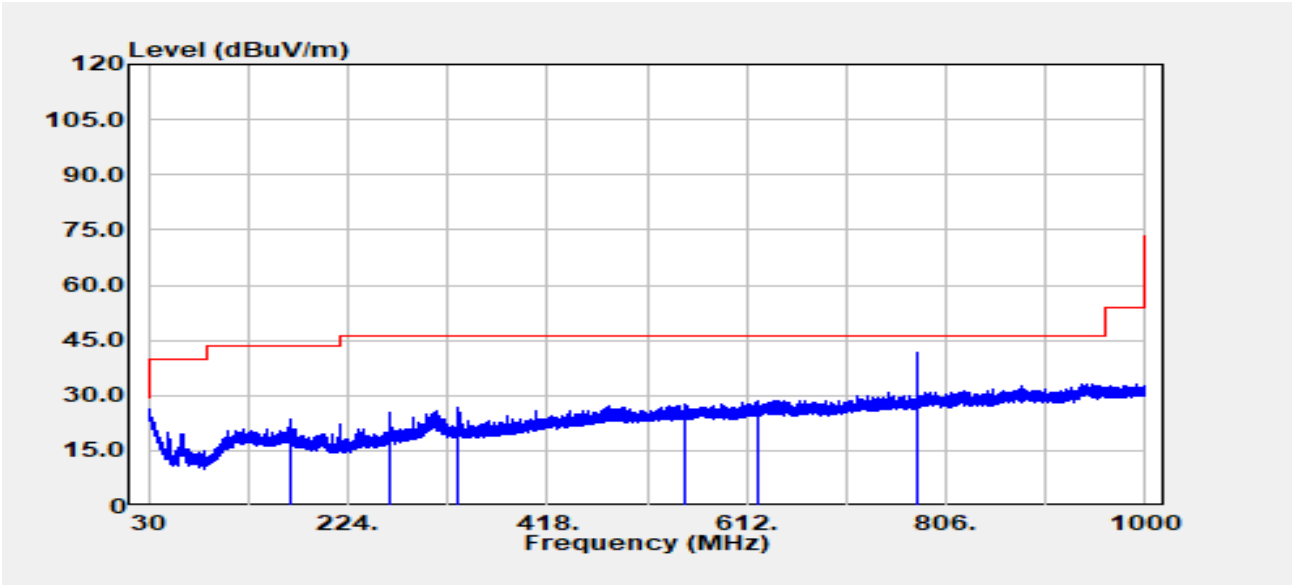
Project No	:TM-2311000354P	Test Date	:2024-04-10
Operation Band	:NFC_BLE 2M_LTE Band13 QPSK1,0 10M	Temp./Humi.	:24.4/59
Frequency	:13.56 MHz_2480 MHz_777.6 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:TX	Engineer	:Tony Chao
EUT Pol	:H	Test Chamber	: 966A
Setting	:		



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dBµV	Factor dB	Actual FS dBµV/m	Limit dBµV/m	Margin dB
104.91	Peak	34.88	-11.32	23.56	43.50	-19.94
216.02	Peak	34.72	-11.94	22.79	46.00	-23.21
331.93	Peak	41.75	-7.91	33.85	46.00	-12.15
499.22	Peak	32.18	-3.58	28.59	46.00	-17.41
672.67	Peak	30.26	-0.72	29.53	46.00	-16.47
777.52	Peak	41.33	1.12	42.45	46.00	-3.55

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

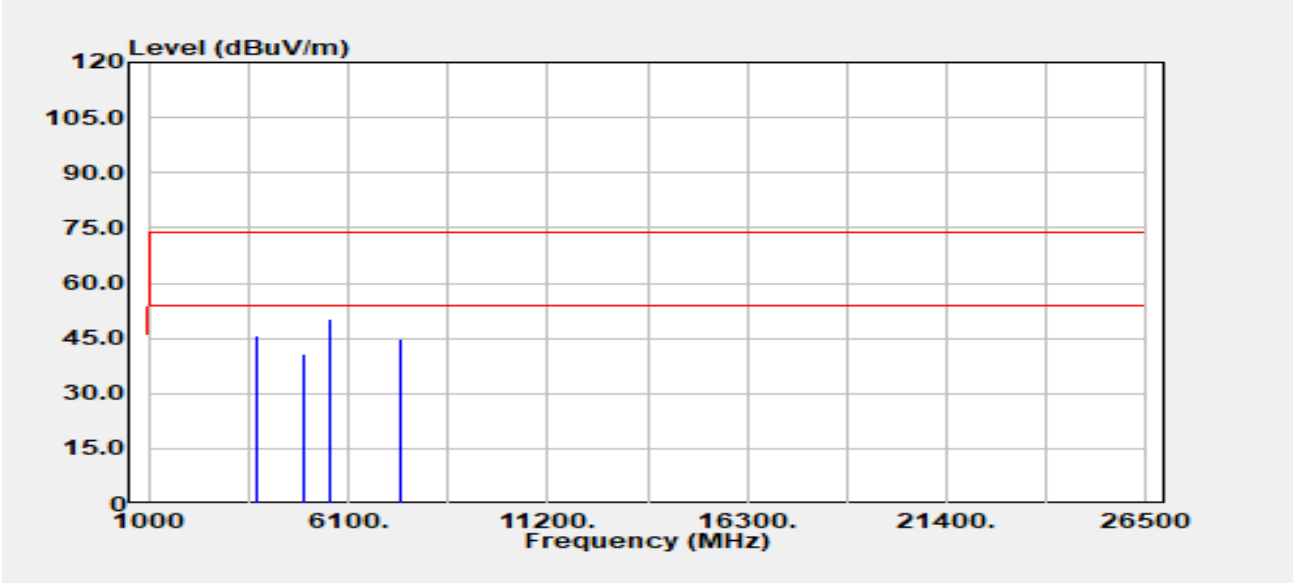
Project No	:TM-2311000354P	Test Date	:2024-04-10
Operation Band	:NFC_BLE 2M_LTE Band13 QPSK1,0 10M	Temp./Humi.	:24.4/59
Frequency	:13.56 MHz_2480 MHz_777.6 MHz	Antenna Pol.	:HORIZONTAL
Operation Mode	:TX	Engineer	:Tony Chao
EUT Pol	:H	Test Chamber	: 966A
Setting	:		



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dBµV	Factor dB	Actual FS dBµV/m	Limit dBµV/m	Margin dB
168.00	Peak	34.36	-10.99	23.37	43.50	-20.13
263.99	Peak	34.90	-9.69	25.21	46.00	-20.79
331.89	Peak	34.64	-7.91	26.73	46.00	-19.27
552.96	Peak	30.43	-2.79	27.63	46.00	-18.37
622.10	Peak	29.93	-1.51	28.42	46.00	-17.58
777.56	Peak	40.52	1.12	41.64	46.00	-4.36

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

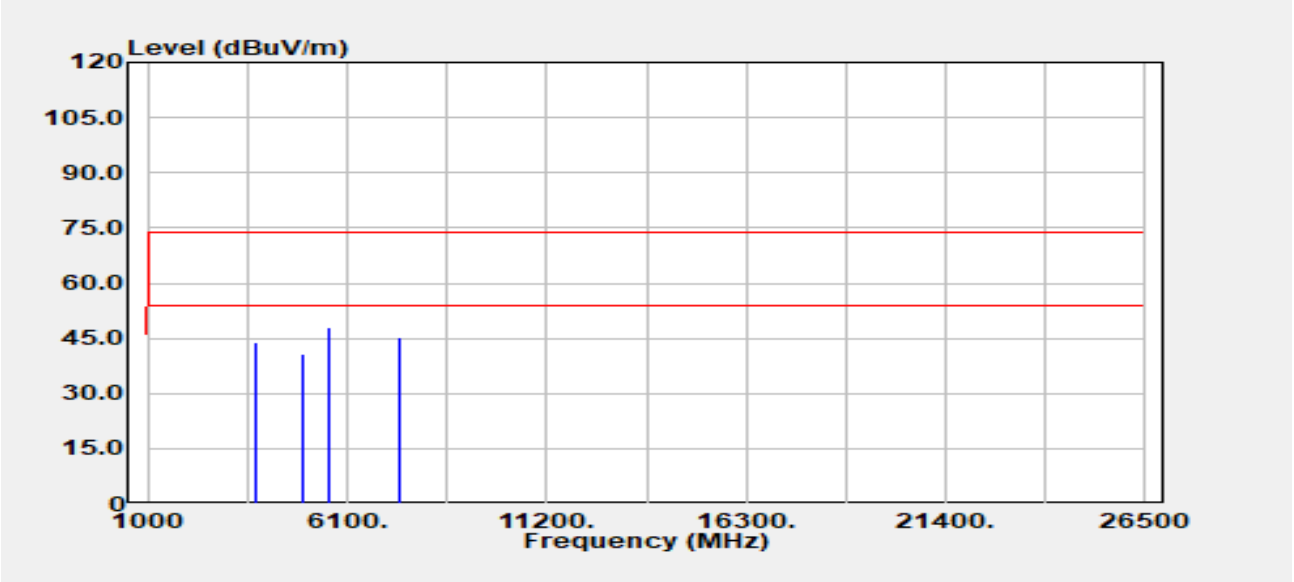
Project No	:TM-2311000354P	Test Date	:2024-04-10
Operation Band	:NFC_BLE 2M_LTE Band2 QPSK1,0_20M	Temp./Humi.	:24.3/60
Frequency	:2480 MHz_1871 MHz	Antenna Pol.	:Vertical
Operation Mode	:TX	Engineer	:Ray Li
EUT Pol	:H	Test Chamber	: 966A
Setting	:		



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dBµV	Factor dB	Actual FS dBµV/m	Limit dBµV/m	Margin dB
3742.00	Peak	45.30	0.23	45.52	82.20	-36.68
4960.00	Peak	37.43	3.21	40.65	74.00	-33.35
4960.00	Average	27.38	3.21	30.59	54.00	-23.41
5613.00	Peak	45.40	4.91	50.30	82.20	-31.90
7440.00	Peak	35.73	8.92	44.65	74.00	-29.35
7440.00	Average	31.13	8.92	40.05	54.00	-13.95

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

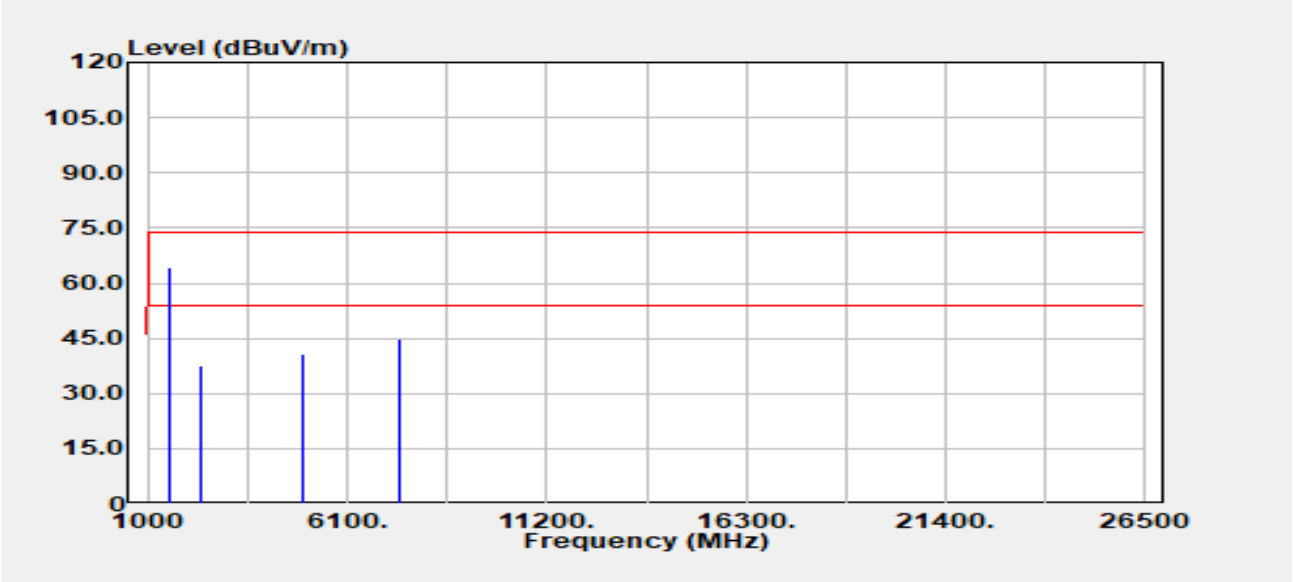
Project No	:TM-2311000354P	Test Date	:2024-04-10
Operation Band	:NFC_BLE 2M_LTE Band2 QPSK1,0_20M	Temp./Humi.	:24.3/60
Frequency	:2480 MHz_1871 MHz	Antenna Pol.	:Horizontal
Operation Mode	:TX	Engineer	:Ray Li
EUT Pol	:H	Test Chamber	: 966A
Setting	:		



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dBµV	Factor dB	Actual FS dBµV/m	Limit dBµV/m	Margin dB
3742.00	Peak	43.75	0.23	43.98	82.20	-38.22
4960.00	Peak	37.61	3.21	40.82	74.00	-33.18
4960.00	Average	27.59	3.21	30.80	54.00	-23.20
5613.00	Peak	43.07	4.91	47.98	82.20	-34.22
7440.00	Peak	36.55	8.92	45.47	74.00	-28.53
7440.00	Average	32.68	8.92	41.60	54.00	-12.40

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

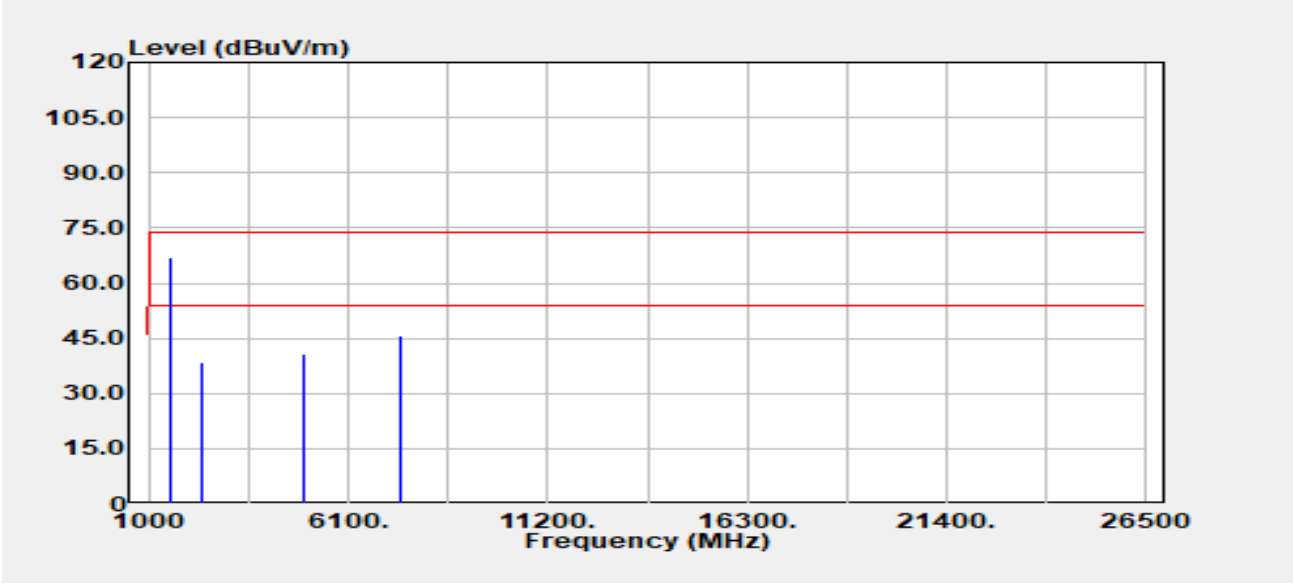
Project No	:TM-2311000354P	Test Date	:2024-04-10
Operation Band	:NFC_BLE 2M_LTE Band13 QPSK1,0_10M	Temp./Humi.	:24.3/60
Frequency	:2480 MHz_777.6 MHz	Antenna Pol.	:Vertical
Operation Mode	:TX	Engineer	:Ray Li
EUT Pol	:H	Test Chamber	: 966A
Setting	:		



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dBµV	Factor dB	Actual FS dBµV/m	Limit dBµV/m	Margin dB
1555.20	Peak	71.44	-7.24	64.20	82.20	-18.00
2332.80	Peak	41.14	-3.61	37.54	82.20	-44.66
4960.00	Peak	37.55	3.21	40.76	74.00	-33.24
4960.00	Average	27.62	3.21	30.83	54.00	-23.17
7440.00	Peak	36.02	8.92	44.94	74.00	-29.06
7440.00	Average	26.07	8.92	34.99	54.00	-19.01

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

Project No	:TM-2311000354P	Test Date	:2024-04-10
Operation Band	:NFC_BLE 2M_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 dBµV	Factor dB	Actual FS dBµV/m	Limit dBµV/m	Margin dB
1555.20	Peak	74.07	-7.24	66.83	82.20	-15.37
2332.80	Peak	42.03	-3.61	38.42	82.20	-43.78
4960.00	Peak	37.33	3.21	40.54	74.00	-33.46
4960.00	Average	27.78	3.21	30.99	54.00	-23.01
7440.00	Peak	36.61	8.92	45.53	74.00	-28.47
7440.00	Average	26.17	8.92	35.09	54.00	-18.91

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--