FCC TEST REPORT
FCC ID: 2BAHYSOT8PRO7921

Report Number.....:	**ZKT-230317L1835E-2**
Date of Test.....	Mar. 03, 2023 to Apr. 06, 2023
Date of issue.....:	Apr. 06, 2023
Total number of pages.....	64
Test Result..... :	PASS
Testing Laboratory.....:	**Shenzhen ZKT Technology Co., Ltd.**
Address ..... :	1/F, No. 101, Building B, No. 6, Tangwei Community Industrial Avenue, Fuhai Street, Bao'an District, Shenzhen, China
Applicant's name .....:	**Shenzhen Soyeer Technology Co., Ltd**
Address ..... :	310C, Jichuang Creative Industry Park, 2# Lixin Road, Fuyong, Baoan District, Shenzhen, China, 518000
Manufacturer's name .....:	**Shenzhen Soyeer Technology Co., Ltd**
Address ..... :	310C, Jichuang Creative Industry Park, 2# Lixin Road, Fuyong, Baoan District, Shenzhen, China, 518000
Test specification:	
Standard.....:	FCC CFR Title 47 Part 15 Subpart C Section 15.247
Test procedure..... :	KDB558074 D01 15.247 Meas Guidance v05r02 ANSI C63.10:2013
Non-standard test method .....:	N/A
Test Report Form No..... :	TRF-EL-110_V0
Test Report Form(s) Originator..... :	ZKT Testing
Master TRF .....:	Dated: 2020-01-06

This device described above has been tested by ZKT, and the test results show that the equipment under test (EUT) is in compliance with the FCC requirements. And it is applicable only to the tested sample identified in the report.
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Product name..... :	**MINI PC**
Trademark .....:	N/A
Model/Type reference..... :	T8 PRO PKT mini
Ratings..... :	Input: 100-240V~50/60Hz 0.8A Max Output: 12.0V⎓2.5A 30.0W

Testing procedure and testing location:

Testing Laboratory.....:	**Shenzhen ZKT Technology Co., Ltd.**
Address.....:	1/F, No. 101, Building B, No. 6, Tangwei Community Industrial Avenue, Fuhai Street, Bao'an District, Shenzhen, China
Tested by (name + signature).....:	Jim Liu Jim Liu
Reviewer (name + signature).....:	Tom Zou Tom Zou
Approved (name + signature).....:	Lake Xie Lake Xie

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1. VERSION

Report No.	Version	Description	Approved
ZKT-230317L1835E-2	Rev.01	Initial issue of report	Apr. 06, 2023

2. SUMMARY OF TEST RESULTS

Test procedures according to the technical standards:

FCC Part15 (15.247) , Subpart C			
Standard Section	Test Item	Result	Remark
FCC part 15.203/15.247 (b)(4)	Antenna requirement	PASS	
FCC part 15.207	AC Power Line Conducted Emission	PASS	
FCC part 15.247 (b)(3)	Conducted Peak Output Power	PASS	
FCC part 15.247 (a)(2)	Channel Bandwidth& 99% OCB	PASS	
FCC part 15.247 (e)	Power Spectral Density	PASS	
FCC part 15.247(d)	Band Edge	PASS	
FCC part 15.205/15.209	Spurious Emission	PASS	

NOTE:

(1)" N/A" denotes test is not applicable in this Test Report

2.1 TEST FACILITY

Shenzhen ZKT Technology Co., Ltd.
Add. : 1/F, No. 101, Building B, No. 6, Tangwei Community Industrial Avenue, Fuhai Street, Bao'an District, Shenzhen, China

FCC Test Firm Registration Number: 692225
Designation Number: CN1299
IC Registered No.: 27033

2.2 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement y ± U · where expended uncertainty U is based on a standard uncertainty multiplied by a coverage factor of k=2 · providing a level of confidence of approximately 95 %。

No.	Item	Uncertainty
1	Conducted Emission Test	±1.38dB
2	RF power conducted	±0.16dB
3	Spurious emissions conducted	±0.21dB
4	All emissions radiated(<1G)	±4.68dB
5	All emissions radiated(>1G)	±4.89dB
6	Temperature	±0.5°C
7	Humidity	±2%

3. GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

Product Name:	MINI PC
Model No.:	T8 PRO PKT mini
Model Different:	All the model are of the same circuit and RF module, and the only difference is the model name. The model T8 PRO is the tested sample.
Hardware Version:	V1.0
Software Version:	V1.0
Sample(s) Status:	Engineer sample
Channel numbers:	802.11b/802.11g /802.11n(HT20):11/ 802.11n(HT40):7
Operation Frequency:	802.11b/802.11g /802.11n(HT20): 2412-2462MHz 802.11n(HT40): 2422-2452MHz
Channel separation:	5MHz
Modulation technology:	IEEE 802.11b: DQPSK/DBPSK/DSSS/CCK IEEE 802.11g: QPSK/BPSK/16QAM/64QAM/OFDM IEEE 802.11n: QPSK/BPSK/16QAM/64QAM/OFDM
Antenna Type:	ANT1: FPC Antenna, ANT2: FPC Antenna
Antenna gain:	ANT1: 2.18dBi, ANT2:2.18dBi
Directional Gain:	5.19dBi
Power supply:	Input:12.0V⎓2.5A 30.0W
SWITCHING POWER ADAPTER:	Input: 100-240V~50/60Hz 0.8A Max Output: 12.0V⎓2.5A 30.0W
Note:Directional Gain=GANT+10*log(NANT)dBi=2.18+10*log(2)dBi=5.19dBi	

Operation Frequency each of channel							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
1	2412MHz	4	2427MHz	7	2442MHz	10	2457MHz
2	2417MHz	5	2432MHz	8	2447MHz	11	2462MHz
3	2422MHz	6	2437MHz	9	2452MHz		

Note:
In section 15.31(m), regards to the operating frequency range over 10 MHz, the Lowest frequency, the middle frequency, and the highest frequency of channel were selected to perform the test, and the selected channel see below:

Test channel	Frequency (MHz)	
	802.11b/802.11g/802.11n(HT20)	802.11n(HT40)
Lowest channel	2412MHz	2422MHz
Middle channel	2437MHz	2437MHz
Highest channel	2462MHz	2452MHz

3.2 DESCRIPTION OF TEST MODES

Transmitting mode	Keep the EUT in continuously transmitting mode
Remark: EUT use new battery during the test, the duty cycle >98%, the test voltage was tuned from 85% to 115% of the nominal rated supply voltage, and found that the worst case was under the nominal rated supply condition. So the report just shows that condition's data.	

We have verified the construction and function in typical operation. All the test modes were carried out with the EUT in transmitting operation, which was shown in this test report and defined as follows:

Pre-scan all kind of data rate in lowest channel, and found the follow list which it was worst case.

Mode	802.11b	802.11g	802.11n(HT20)	802.11n(HT40)
Data rate	1Mbps	6Mbps	6.5Mbps	13Mbps

3.3 BLOCK DIGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED

Radiated Emission

Adapter → EUT

Conducted Spurious

Adapter → EUT

3.4 DESCRIPTION OF SUPPORT UNITS(CONDUCTED MODE)

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Item	Equipment	Mfr/Brand	Model/Type No.	Series No.	Note
E-1	MINI PC	N/A	T8 PRO	N/A	EUT
E-2	Adapter	N/A	AD0301-1202500UB	N/A	EUT

Item	Shielded Type	Ferrite Core	Length	Note

Note:

(1) The support equipment was authorized by Declaration of Confirmation.
(2) For detachable type I/O cable should be specified the length in cm in 『Length』 column.

3.5EQUIPMENTS LIST FOR ALL TEST ITEMS

Radiation Test equipment

Item	Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
1	Spectrum Analyzer (9kHz-26.5GHz)	KEYSIGHT	9020A	MY55370835	Oct. 28, 2022	Oct. 27, 2023
2	Spectrum Analyzer (10kHz-39.9GHz)	R&S	FSQ	100363	Oct. 28, 2022	Oct. 27, 2023
3	EMI Test Receiver (9kHz-7GHz)	R&S	ESCI7	101169	Oct. 28, 2022	Oct. 27, 2023
4	Bilog Antenna (30MHz-1500MHz)	Schwarzbeck	VULB9168	N/A	Nov. 02, 2022	Nov. 01, 2023
5	Horn Antenna (1GHz-18GHz)	Agilent	AH-118	071145	Nov. 01, 2022	Oct. 31, 2023
6	Horn Antenna (15GHz-40GHz)	A.H.System	SAS-574	588	Oct. 28, 2022	Oct. 27, 2023
7	Loop Antenna	TESEQ	HLA6121	58357	Nov. 01, 2022	Oct. 31, 2023
8	Amplifier (30-1000MHz)	EM Electronics	EM330 Amplifier	060747	Nov. 15, 2022	Nov. 14, 2023
9	Amplifier (1GHz-26.5GHz)	Agilent	8449B	3008A00315	Oct. 28, 2022	Oct. 27, 2023
10	Amplifier (500MHz-40GHz)	QuanJuDa	DLE-161	097	Oct. 28, 2022	Oct. 27, 2023
11	Test Cable	N/A	R-01	N/A	Oct. 28, 2022	Oct. 27, 2023
12	Test Cable	N/A	R-02	N/A	Oct. 28, 2022	Oct. 27, 2023
13	Test Cable	N/A	R-03	N/A	Oct. 28, 2022	Oct. 27, 2023
14	Test Cable	N/A	RF-01	N/A	Oct. 28, 2022	Oct. 27, 2023
15	Test Cable	N/A	RF-02	N/A	Oct. 28, 2022	Oct. 27, 2023
16	Test Cable	N/A	RF-03	N/A	Oct. 28, 2022	Oct. 27, 2023
17	ESG Signal Generator	Agilent	E4421B	N/A	Oct. 21, 2022	Oct. 20, 2023
18	Signal Generator	Agilent	N5182A	N/A	Oct. 21, 2022	Oct. 20, 2023
19	Magnetic Field Probe Tester	Narda	ELT-400	0-0344	Nov. 15, 2022	Nov. 14, 2023
20	Wideband Radio Communication Test	R&S	CMW500	106504	Oct. 28, 2022	Oct. 27, 2023
21	MWRF Power Meter Test system	MW	MW100-RPCB	N/A	Oct. 21, 2022	Oct. 20, 2023
22	D.C. Power Supply	LongWei	TPR-6405D	N/A	\	\
23	EMC Software	Frad	EZ-EMC	Ver.EMC-CON 3A1.1	\	\
24	RF Software	MW	MTS8310	V2.0.0.0	\	\
25	Turntable	MF	MF-7802BS	N/A	\	\
26	Antenna tower	MF	MF-7802BS	N/A	\	\

Conduction Test equipment

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
1	LISN	R&S	ENV216	101471	Oct. 21, 2022	Oct. 20, 2023
2	LISN	CYBERTEK	EM5040A	E1850400149	Oct. 21, 2022	Oct. 20, 2023
3	Test Cable	N/A	C-01	N/A	Oct. 21, 2022	Oct. 20, 2023
4	Test Cable	N/A	C-02	N/A	Oct. 21, 2022	Oct. 20, 2023
5	Test Cable	N/A	C-03	N/A	Oct. 21, 2022	Oct. 20, 2023
6	EMI Test Receiver	R&S	ESCI3	101393	Oct. 28, 2022	Oct. 27, 2023
7	EMC Software	Frad	EZ-EMC	Ver.EMC-CON 3A1.1	\	\

4. EMC EMISSION TEST

4.1 CONDUCTED EMISSION MEASUREMENT

Test Requirement:	FCC Part15 C Section 15.207
Test Method:	ANSI C63.10:2013
Test Frequency Range:	150KHz to 30MHz
Receiver setup:	RBW=9KHz, VBW=30KHz, Sweep time=auto

4.1.1 POWER LINE CONDUCTED EMISSION Limits

FREQUENCY (MHz)	Limit (dBuV)		Standard
	Quasi-peak	Average	
0.15 -0.5	66 - 56 *	56 - 46 *	FCC
0.50 -5.0	56.00	46.00	FCC
5.0 -30.0	60.00	50.00	FCC

Note:

(1) *Decreases with the logarithm of the frequency.

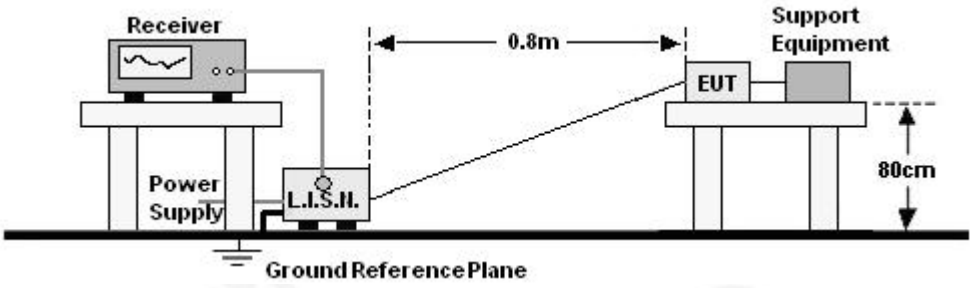
4.1.2 TEST PROCEDURE

a. The EUT was placed 0.1 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
b. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
c. I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
d. LISN at least 80 cm from nearest part of EUT chassis.
e. For the actual test configuration, please refer to the related Item –EUT Test Photos.

4.1.3 DEVIATION FROM TEST STANDARD

No deviation

4.1.4 TEST SETUP

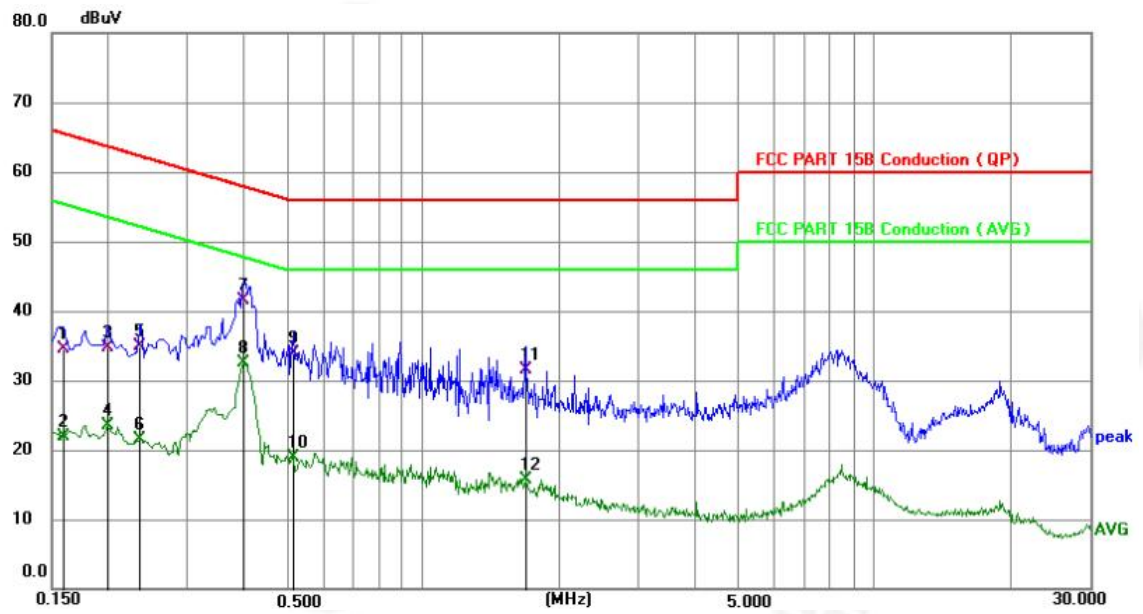


4.1.5 EUT OPERATING CONDITIONS

The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.

4.1.6 test result

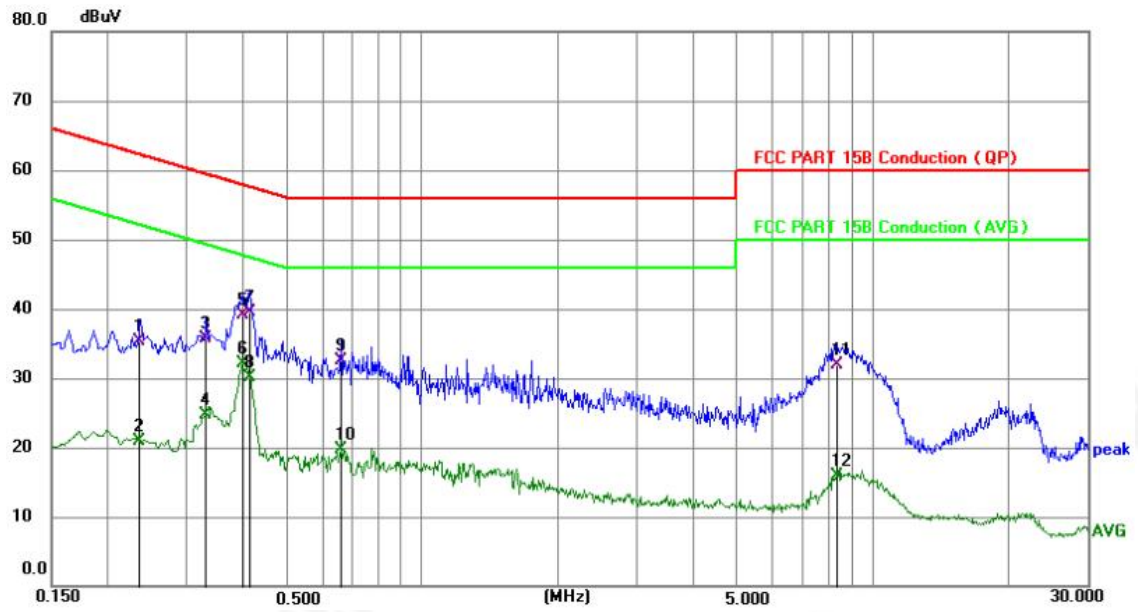
Temperature:	25.1℃	Relative Humidity :	50%
Pressure:	101kPa	Phase :	L
Test Voltage:	AC 120V/60Hz		



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.1590	24.71	9.89	34.60	65.52	-30.92	QP	P
2	0.1590	12.03	9.89	21.92	55.52	-33.60	AVG	P
3	0.1995	24.85	9.91	34.76	63.63	-28.87	QP	P
4	0.1995	13.52	9.91	23.43	53.63	-30.20	AVG	P
5	0.2353	25.06	9.92	34.98	62.26	-27.28	QP	P
6	0.2353	11.58	9.92	21.50	52.26	-30.76	AVG	P
7	0.3975	31.54	9.99	41.53	57.91	-16.38	QP	P
8 *	0.3975	22.46	9.99	32.45	47.91	-15.46	AVG	P
9	0.5142	23.98	10.02	34.00	56.00	-22.00	QP	P
10	0.5142	8.89	10.02	18.91	46.00	-27.09	AVG	P
11	1.6890	21.37	10.06	31.43	56.00	-24.57	QP	P
12	1.6890	5.60	10.06	15.66	46.00	-30.34	AVG	P

Notes:
1.An initial pre-scan was performed on the line and neutral lines with peak detector.
2.Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission.
3.Mesurement Level = Reading level + Correct Factor

Temperature:	25.1℃	Relative Humidity :	50%
Pressure:	101kPa	Phase :	N
Test Voltage:	AC 120V/60Hz		



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.2353	25.33	9.92	35.25	62.26	-27.01	QP	P
2	0.2353	10.89	9.92	20.81	52.26	-31.45	AVG	P
3	0.3300	25.70	9.97	35.67	59.45	-23.78	QP	P
4	0.3300	14.76	9.97	24.73	49.45	-24.72	AVG	P
5	0.3975	29.15	9.99	39.14	57.91	-18.77	QP	P
6 *	0.3975	22.21	9.99	32.20	47.91	-15.71	AVG	P
7	0.4110	29.49	9.99	39.48	57.63	-18.15	QP	P
8	0.4110	20.11	9.99	30.10	47.63	-17.53	AVG	P
9	0.6582	22.39	10.03	32.42	56.00	-23.58	QP	P
10	0.6582	9.62	10.03	19.65	46.00	-26.35	AVG	P
11	8.3353	21.73	10.09	31.82	60.00	-28.18	QP	P
12	8.3353	5.80	10.09	15.89	50.00	-34.11	AVG	P

Notes:
1.An initial pre-scan was performed on the line and neutral lines with peak detector.
2.Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission.
3.Mesurement Level = Reading level + Correct Factor

4.2 RADIATED EMISSION MEASUREMENT

Test Requirement:	FCC Part15 C Section 15.209
Test Method:	ANSI C63.10:2013
Test Frequency Range:	9kHz to 25GHz
Test site:	Measurement Distance: 3m
Receiver setup:	

Frequency	Detector	RBW	VBW	Value
9KHz-150KHz	Quasi-peak	200Hz	600Hz	Quasi-peak
150KHz-30MHz	Quasi-peak	9KHz	30KHz	Quasi-peak
30MHz-1GHz	Quasi-peak	100KHz	300KHz	Quasi-peak
Above 1GHz	Peak	1MHz	3MHz	Peak
	Peak	1MHz	10Hz	Average

4.2.1 RADIATED EMISSION LIMITS

Frequencies (MHz)	Field Strength (micorvolts/meter)	Measurement Distance (meters)
0.009~0.490	2400/F(KHz)	300
0.490~1.705	24000/F(KHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
Above 960	500	3

LIMITS OF RADIATED EMISSION MEASUREMENT

FREQUENCY (MHz)	Limit (dBuV/m) (at 3M)	
	PEAK	AVERAGE
Above 1000	74	54

Notes:

(1) The limit for radiated test was performed according to FCC PART 15C.

(2) The tighter limit applies at the band edges.

(3) Emission level (dBuV/m)=20log Emission level (uV/m).

4.2.2 TEST PROCEDURE

Below 1GHz test procedure as below:

a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoiccamber. The table was rotated 360 degrees to determine the position of the highest radiation.

b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of avariable-height antenna tower.

c. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dBmargin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

Above 1GHz test procedure as below:

g. Different between above is the test site, change from Semi- Anechoic Chamber to fully Anechoic Chamber and change form table 0.8 meter to 1.5 meter(Above 18GHz the distance is 1 meter and table is 1.5 meter).
h. Test the EUT in the lowest channel ,the middle channel ,the Highest channel

Note:

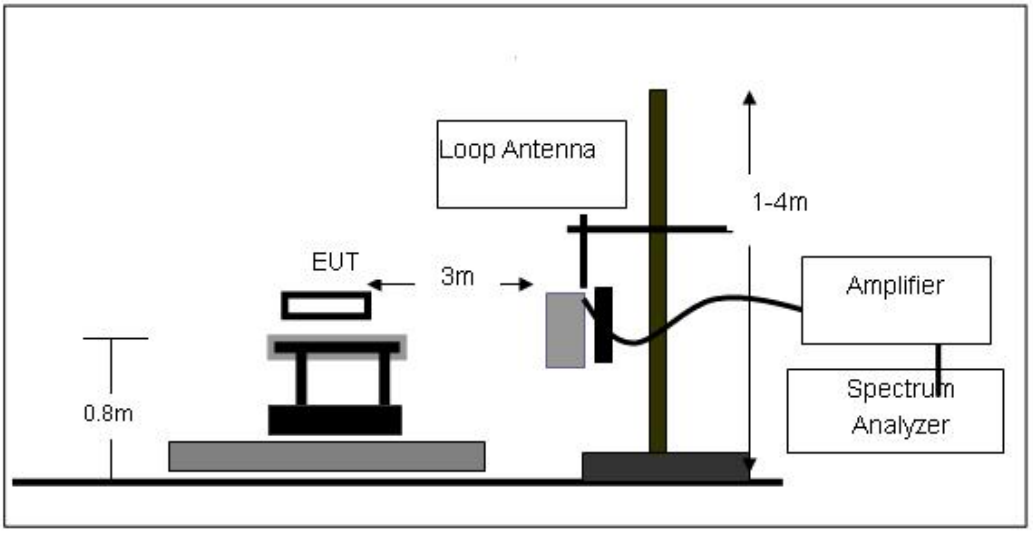
Both horizontal and vertical antenna polarities were tested
and performed pretest to three orthogonal axis. The worst case emissions were reported

4.2.3 DEVIATION FROM TEST STANDARD

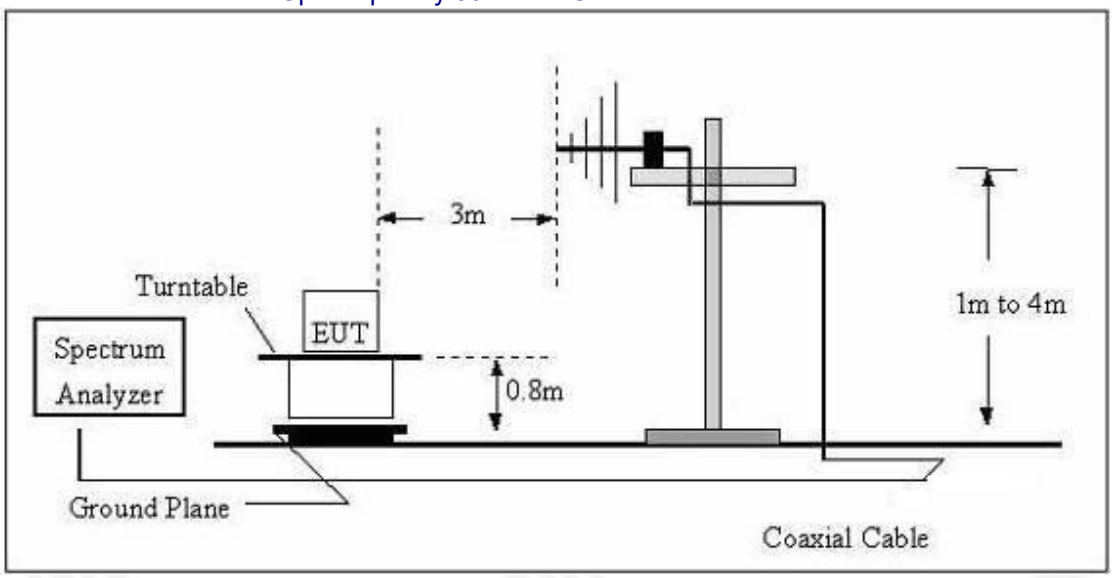
No deviation

4.2.4 TEST SETUP

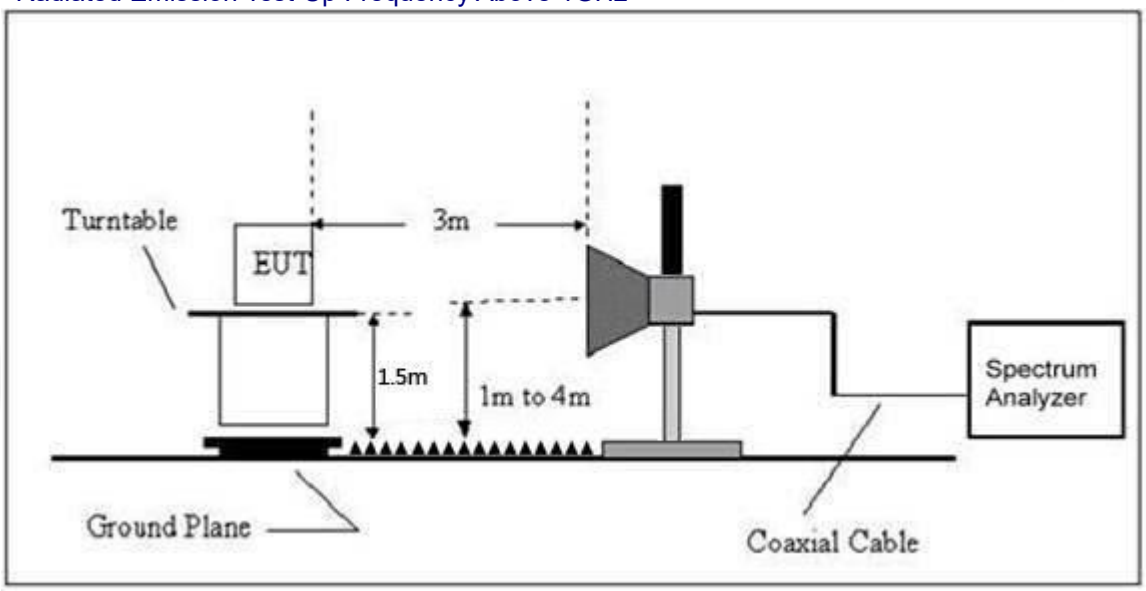
（A）Radiated Emission Test-Up Frequency Below 30MHz



（B）Radiated Emission Test-Up Frequency 30MHz~1GHz



（C）Radiated Emission Test-Up Frequency Above 1GHz



4.2.5 EUT OPERATING CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

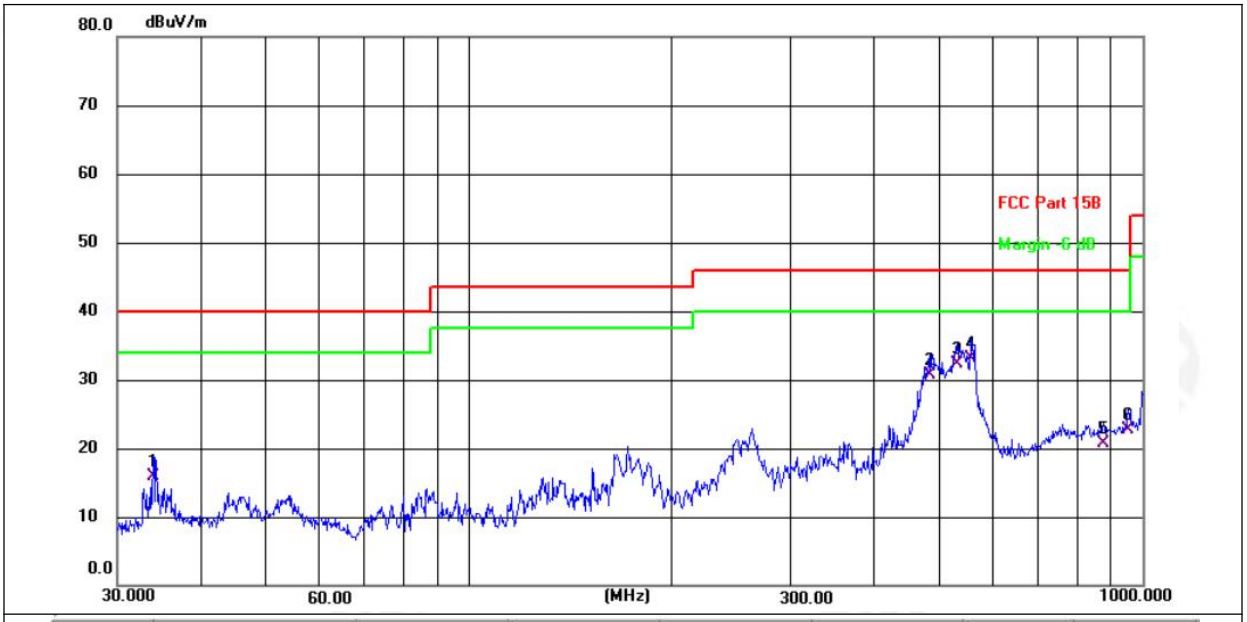
4.2.6 TEST RESULTS

Between 9KHz – 30MHz

The emission from 9 kHz to 30MHz was pre-tested and found the result was 20dB lower than the limit, and according to 15.31(o) & RSS-Gen 6.13, the test result no need to reported.

Between 30MHz – 1GHz

Temperature :	25.1℃	Relative Humidity :	50%
Pressure :	101kPa	Polarization :	Horizontal
Test Voltage :	AC 120V/60Hz		



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	33.9172	32.45	-16.51	15.94	40.00	-24.06	QP
2	482.2155	41.07	-10.37	30.70	46.00	-15.30	QP
3	530.1013	41.85	-9.50	32.35	46.00	-13.65	QP
4 *	554.8253	42.12	-9.02	33.10	46.00	-12.90	QP
5	875.2470	24.68	-3.99	20.69	46.00	-25.31	QP
6	952.0937	25.75	-3.09	22.66	46.00	-23.34	QP

Temperature :	25.1℃	Relative Humidity :	50%
Pressure :	101kPa	Polarization :	Vertical
Test Voltage :	AC 120V/60Hz		

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	34.7601	35.26	-16.36	18.90	40.00	-21.10	QP
2	53.3180	36.82	-14.93	21.89	40.00	-18.11	QP
3	166.0680	40.92	-19.01	21.91	43.50	-21.59	QP
4	480.5276	41.25	-10.39	30.86	46.00	-15.14	QP
5	539.4773	46.58	-9.32	37.26	46.00	-8.74	QP
6 *	556.7743	49.24	-8.99	40.25	46.00	-5.75	QP

Remarks:
1.Final Level =Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor
2.The emission levels of other frequencies are very lower than the limit and not show in test report.
3.The test data shows only the worst case 802.11b mode (Low Channel:2412MHz).

1GHz~25GHz

802.11b

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Pre-amplifier (dB)	Cable Loss (dB)	Antenna Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
Low Channel:2412MHz									
V	4824.00	60.83	30.55	5.77	24.66	60.71	74	-13.29	PK
V	4824.00	43.59	30.55	5.77	24.66	43.47	54	-10.53	AV
V	7236.00	54.03	30.33	6.32	24.55	54.57	74	-19.43	PK
V	7236.00	37.18	30.33	6.32	24.55	37.72	54	-16.28	AV
V	9648.00	51.43	30.85	7.45	24.69	52.72	74	-21.28	PK
V	9648.00	34.96	30.85	7.45	24.69	36.25	54	-17.75	AV
V	12060.00	56.29	31.02	8.99	25.57	59.83	74	-14.17	PK
V	12060.00	38.63	31.02	8.99	25.57	42.17	54	-11.83	AV
H	4824.00	54.05	30.55	5.77	24.66	53.93	74	-20.07	PK
H	4824.00	37.37	30.55	5.77	24.66	37.25	54	-16.75	AV
H	7236.00	51.71	30.33	6.32	24.55	52.25	74	-21.75	PK
H	7236.00	36.09	30.33	6.32	24.55	36.63	54	-17.37	AV
H	9648.00	49.25	30.85	7.45	24.69	50.54	74	-23.46	PK
H	9648.00	35.45	30.85	7.45	24.69	36.74	54	-17.26	AV
H	12060.00	47.21	31.02	8.99	25.57	50.75	74	-23.25	PK
H	12060.00	33.24	31.02	8.99	25.57	36.78	54	-17.22	AV

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Pre-amplifier (dB)	Cable Loss (dB)	Antenna Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
Middle Channel:2437MHz									
V	4874.00	60.89	30.55	5.77	24.66	60.77	74	-13.23	PK
V	4874.00	42.78	30.55	5.77	24.66	42.66	54	-11.34	AV
V	7311.00	53.19	30.33	6.32	24.55	53.73	74	-20.27	PK
V	7311.00	37.27	30.33	6.32	24.55	37.81	54	-16.19	AV
V	9748.00	51.81	30.85	7.45	24.69	53.1	74	-20.9	PK
V	9748.00	35.14	30.85	7.45	24.69	36.43	54	-17.57	AV
V	12185.00	56.36	31.02	8.99	25.57	59.9	74	-14.1	PK
V	12185.00	38.29	31.02	8.99	25.57	41.83	54	-12.17	AV
H	4874.00	53.96	30.55	5.77	24.66	53.84	74	-20.16	PK
H	4874.00	37.56	30.55	5.77	24.66	37.44	54	-16.56	AV
H	7311.00	51.25	30.33	6.32	24.55	51.79	74	-22.21	PK
H	7311.00	35.78	30.33	6.32	24.55	36.32	54	-17.68	AV
H	9748.00	49.19	30.85	7.45	24.69	50.48	74	-23.52	PK
H	9748.00	35.37	30.85	7.45	24.69	36.66	54	-17.34	AV
H	12185.00	47.59	31.02	8.99	25.57	51.13	74	-22.87	PK
H	12185.00	33.58	31.02	8.99	25.57	37.12	54	-16.88	AV

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Pre-amplifier (dB)	Cable Loss (dB)	Antenna Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
High Channel:2462MHz									
V	4924.00	62.20	30.55	5.77	24.66	62.08	74	-11.92	PK
V	4924.00	43.48	30.55	5.77	24.66	43.36	54	-10.64	AV
V	7386.00	53.88	30.33	6.32	24.55	54.42	74	-19.58	PK
V	7386.00	37.46	30.33	6.32	24.55	38	54	-16	AV
V	9848.00	51.35	30.85	7.45	24.69	52.64	74	-21.36	PK
V	9848.00	35.70	30.85	7.45	24.69	36.99	54	-17.01	AV
V	12310.00	56.55	31.02	8.99	25.57	60.09	74	-13.91	PK
V	12310.00	38.70	31.02	8.99	25.57	42.24	54	-11.76	AV
H	4924.00	53.65	30.55	5.77	24.66	53.53	74	-20.47	PK
H	4924.00	37.43	30.55	5.77	24.66	37.31	54	-16.69	AV
H	7386.00	50.99	30.33	6.32	24.55	51.53	74	-22.47	PK
H	7386.00	36.31	30.33	6.32	24.55	36.85	54	-17.15	AV
H	9848.00	49.62	30.85	7.45	24.69	50.91	74	-23.09	PK
H	9848.00	34.66	30.85	7.45	24.69	35.95	54	-18.05	AV
H	12310.00	47.50	31.02	8.99	25.57	51.04	74	-22.96	PK
H	12310.00	33.04	31.02	8.99	25.57	36.58	54	-17.42	AV

Remark:
1. Emission Level = Meter Reading + Antenna Factor + Cable Loss – Pre-amplifier,
Margin= Emission Level - Limit
2. If peak below the average limit, the average emission was no test.
3. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

802.11g

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Pre-amplifier (dB)	Cable Loss (dB)	Antenna Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
Low Channel:2412MHz									
V	4824.00	60.64	30.55	5.77	24.66	60.52	74	-13.48	PK
V	4824.00	43.00	30.55	5.77	24.66	42.88	54	-11.12	AV
V	7236.00	53.36	30.33	6.32	24.55	53.9	74	-20.1	PK
V	7236.00	37.22	30.33	6.32	24.55	37.76	54	-16.24	AV
V	9648.00	52.12	30.85	7.45	24.69	53.41	74	-20.59	PK
V	9648.00	35.15	30.85	7.45	24.69	36.44	54	-17.56	AV
V	12060.00	56.53	31.02	8.99	25.57	60.07	74	-13.93	PK
V	12060.00	38.43	31.02	8.99	25.57	41.97	54	-12.03	AV
H	4824.00	54.31	30.55	5.77	24.66	54.19	74	-19.81	PK
H	4824.00	37.08	30.55	5.77	24.66	36.96	54	-17.04	AV
H	7236.00	51.50	30.33	6.32	24.55	52.04	74	-21.96	PK
H	7236.00	36.25	30.33	6.32	24.55	36.79	54	-17.21	AV
H	9648.00	49.30	30.85	7.45	24.69	50.59	74	-23.41	PK
H	9648.00	35.50	30.85	7.45	24.69	36.79	54	-17.21	AV
H	12060.00	47.28	31.02	8.99	25.57	50.82	74	-23.18	PK
H	12060.00	33.24	31.02	8.99	25.57	36.78	54	-17.22	AV

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Pre-amplifier (dB)	Cable Loss (dB)	Antenna Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
Middle Channel:2437MHz									
V	4874.00	60.50	30.55	5.77	24.66	60.38	74	-13.62	PK
V	4874.00	43.38	30.55	5.77	24.66	43.26	54	-10.74	AV
V	7311.00	53.42	30.33	6.32	24.55	53.96	74	-20.04	PK
V	7311.00	37.03	30.33	6.32	24.55	37.57	54	-16.43	AV
V	9748.00	52.01	30.85	7.45	24.69	53.3	74	-20.7	PK
V	9748.00	34.90	30.85	7.45	24.69	36.19	54	-17.81	AV
V	12185.00	55.89	31.02	8.99	25.57	59.43	74	-14.57	PK
V	12185.00	38.81	31.02	8.99	25.57	42.35	54	-11.65	AV
H	4874.00	54.60	30.55	5.77	24.66	54.48	74	-19.52	PK
H	4874.00	37.41	30.55	5.77	24.66	37.29	54	-16.71	AV
H	7311.00	50.86	30.33	6.32	24.55	51.4	74	-22.6	PK
H	7311.00	36.48	30.33	6.32	24.55	37.02	54	-16.98	AV
H	9748.00	49.21	30.85	7.45	24.69	50.5	74	-23.5	PK
H	9748.00	35.57	30.85	7.45	24.69	36.86	54	-17.14	AV
H	12185.00	47.08	31.02	8.99	25.57	50.62	74	-23.38	PK
H	12185.00	32.94	31.02	8.99	25.57	36.48	54	-17.52	AV

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Pre-amplifier (dB)	Cable Loss (dB)	Antenna Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
High Channel:2462MHz									
V	4924.00	61.90	30.55	5.77	24.66	61.78	74	-12.22	PK
V	4924.00	43.54	30.55	5.77	24.66	43.42	54	-10.58	AV
V	7386.00	53.34	30.33	6.32	24.55	53.88	74	-20.12	PK
V	7386.00	37.26	30.33	6.32	24.55	37.8	54	-16.2	AV
V	9848.00	51.66	30.85	7.45	24.69	52.95	74	-21.05	PK
V	9848.00	34.99	30.85	7.45	24.69	36.28	54	-17.72	AV
V	12310.00	56.00	31.02	8.99	25.57	59.54	74	-14.46	PK
V	12310.00	38.15	31.02	8.99	25.57	41.69	54	-12.31	AV
H	4924.00	53.67	30.55	5.77	24.66	53.55	74	-20.45	PK
H	4924.00	37.47	30.55	5.77	24.66	37.35	54	-16.65	AV
H	7386.00	50.64	30.33	6.32	24.55	51.18	74	-22.82	PK
H	7386.00	35.75	30.33	6.32	24.55	36.29	54	-17.71	AV
H	9848.00	49.05	30.85	7.45	24.69	50.34	74	-23.66	PK
H	9848.00	34.84	30.85	7.45	24.69	36.13	54	-17.87	AV
H	12310.00	47.64	31.02	8.99	25.57	51.18	74	-22.82	PK
H	12310.00	32.76	31.02	8.99	25.57	36.3	54	-17.7	AV

Remark:
1. Emission Level = Meter Reading + Antenna Factor + Cable Loss – Pre-amplifier,
Margin= Emission Level - Limit
2. If peak below the average limit, the average emission was no test.
3. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

802.11n20

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Pre-amplifier (dB)	Cable Loss (dB)	Antenna Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
Low Channel:2412MHz									
V	4824.00	60.18	30.55	5.77	24.66	60.06	74	-13.94	PK
V	4824.00	42.96	30.55	5.77	24.66	42.84	54	-11.16	AV
V	7236.00	53.28	30.33	6.32	24.55	53.82	74	-20.18	PK
V	7236.00	37.42	30.33	6.32	24.55	37.96	54	-16.04	AV
V	9648.00	51.91	30.85	7.45	24.69	53.2	74	-20.8	PK
V	9648.00	35.26	30.85	7.45	24.69	36.55	54	-17.45	AV
V	12060.00	56.56	31.02	8.99	25.57	60.1	74	-13.9	PK
V	12060.00	38.28	31.02	8.99	25.57	41.82	54	-12.18	AV
H	4824.00	53.69	30.55	5.77	24.66	53.57	74	-20.43	PK
H	4824.00	36.98	30.55	5.77	24.66	36.86	54	-17.14	AV
H	7236.00	51.79	30.33	6.32	24.55	52.33	74	-21.67	PK
H	7236.00	36.13	30.33	6.32	24.55	36.67	54	-17.33	AV
H	9648.00	49.53	30.85	7.45	24.69	50.82	74	-23.18	PK
H	9648.00	34.77	30.85	7.45	24.69	36.06	54	-17.94	AV
H	12060.00	47.29	31.02	8.99	25.57	50.83	74	-23.17	PK
H	12060.00	32.68	31.02	8.99	25.57	36.22	54	-17.78	AV

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Pre-amplifier (dB)	Cable Loss (dB)	Antenna Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
Middle Channel:2437MHz									
V	4874.00	60.04	30.55	5.77	24.66	59.92	74	-14.08	PK
V	4874.00	42.99	30.55	5.77	24.66	42.87	54	-11.13	AV
V	7311.00	53.40	30.33	6.32	24.55	53.94	74	-20.06	PK
V	7311.00	37.11	30.33	6.32	24.55	37.65	54	-16.35	AV
V	9748.00	51.16	30.85	7.45	24.69	52.45	74	-21.55	PK
V	9748.00	35.30	30.85	7.45	24.69	36.59	54	-17.41	AV
V	12185.00	56.29	31.02	8.99	25.57	59.83	74	-14.17	PK
V	12185.00	38.52	31.02	8.99	25.57	42.06	54	-11.94	AV
H	4874.00	54.35	30.55	5.77	24.66	54.23	74	-19.77	PK
H	4874.00	37.70	30.55	5.77	24.66	37.58	54	-16.42	AV
H	7311.00	51.28	30.33	6.32	24.55	51.82	74	-22.18	PK
H	7311.00	36.40	30.33	6.32	24.55	36.94	54	-17.06	AV
H	9748.00	48.69	30.85	7.45	24.69	49.98	74	-24.02	PK
H	9748.00	35.09	30.85	7.45	24.69	36.38	54	-17.62	AV
H	12185.00	46.97	31.02	8.99	25.57	50.51	74	-23.49	PK
H	12185.00	33.03	31.02	8.99	25.57	36.57	54	-17.43	AV

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Pre-amplifier (dB)	Cable Loss (dB)	Antenna Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
High Channel:2462MHz									
V	4924.00	61.84	30.55	5.77	24.66	61.72	74	-12.28	PK
V	4924.00	42.92	30.55	5.77	24.66	42.8	54	-11.2	AV
V	7386.00	53.46	30.33	6.32	24.55	54	74	-20	PK
V	7386.00	37.92	30.33	6.32	24.55	38.46	54	-15.54	AV
V	9848.00	51.19	30.85	7.45	24.69	52.48	74	-21.52	PK
V	9848.00	35.08	30.85	7.45	24.69	36.37	54	-17.63	AV
V	12310.00	56.51	31.02	8.99	25.57	60.05	74	-13.95	PK
V	12310.00	38.68	31.02	8.99	25.57	42.22	54	-11.78	AV
H	4924.00	53.89	30.55	5.77	24.66	53.77	74	-20.23	PK
H	4924.00	37.28	30.55	5.77	24.66	37.16	54	-16.84	AV
H	7386.00	51.14	30.33	6.32	24.55	51.68	74	-22.32	PK
H	7386.00	36.46	30.33	6.32	24.55	37	54	-17	AV
H	9848.00	49.34	30.85	7.45	24.69	50.63	74	-23.37	PK
H	9848.00	34.84	30.85	7.45	24.69	36.13	54	-17.87	AV
H	12310.00	47.61	31.02	8.99	25.57	51.15	74	-22.85	PK
H	12310.00	32.61	31.02	8.99	25.57	36.15	54	-17.85	AV

Remark:
1. Emission Level = Meter Reading + Antenna Factor + Cable Loss – Pre-amplifier,
Margin= Emission Level - Limit
2. If peak below the average limit, the average emission was no test.
3. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

802.11n40

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Pre-amplifier (dB)	Cable Loss (dB)	Antenna Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
Low Channel:2422MHz									
V	4844	60.37	30.55	5.77	24.66	60.25	74	-13.75	PK
V	4844	43.18	30.55	5.77	24.66	43.06	54	-10.94	AV
V	7266	53.25	30.33	6.32	24.55	53.79	74	-20.21	PK
V	7266	37.59	30.33	6.32	24.55	38.13	54	-15.87	AV
V	9688	51.81	30.85	7.45	24.69	53.1	74	-20.9	PK
V	9688	35.65	30.85	7.45	24.69	36.94	54	-17.06	AV
V	12110	56.83	31.02	8.99	25.57	60.37	74	-13.63	PK
V	12110	38.31	31.02	8.99	25.57	41.85	54	-12.15	AV
H	4824.00	53.70	30.55	5.77	24.66	53.58	74	-20.42	PK
H	4824.00	37.20	30.55	5.77	24.66	37.08	54	-16.92	AV
H	7236.00	51.69	30.33	6.32	24.55	52.23	74	-21.77	PK
H	7236.00	36.18	30.33	6.32	24.55	36.72	54	-17.28	AV
H	9648.00	49.50	30.85	7.45	24.69	50.79	74	-23.21	PK
H	9648.00	34.96	30.85	7.45	24.69	36.25	54	-17.75	AV
H	12060.00	47.17	31.02	8.99	25.57	50.71	74	-23.29	PK
H	12060.00	32.58	31.02	8.99	25.57	36.12	54	-17.88	AV

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Pre-amplifier (dB)	Cable Loss (dB)	Antenna Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
Middle Channel:2437MHz									
V	4874.00	60.25	30.55	5.77	24.66	60.13	74	-13.87	PK
V	4874.00	43.14	30.55	5.77	24.66	43.02	54	-10.98	AV
V	7311.00	53.71	30.33	6.32	24.55	54.25	74	-19.75	PK
V	7311.00	37.20	30.33	6.32	24.55	37.74	54	-16.26	AV
V	9748.00	51.21	30.85	7.45	24.69	52.5	74	-21.5	PK
V	9748.00	35.30	30.85	7.45	24.69	36.59	54	-17.41	AV
V	12185.00	56.43	31.02	8.99	25.57	59.97	74	-14.03	PK
V	12185.00	38.80	31.02	8.99	25.57	42.34	54	-11.66	AV
H	4874.00	54.32	30.55	5.77	24.66	54.2	74	-19.8	PK
H	4874.00	37.68	30.55	5.77	24.66	37.56	54	-16.44	AV
H	7311.00	51.44	30.33	6.32	24.55	51.98	74	-22.02	PK
H	7311.00	36.31	30.33	6.32	24.55	36.85	54	-17.15	AV
H	9748.00	48.67	30.85	7.45	24.69	49.96	74	-24.04	PK
H	9748.00	34.94	30.85	7.45	24.69	36.23	54	-17.77	AV
H	12185.00	46.86	31.02	8.99	25.57	50.4	74	-23.6	PK
H	12185.00	33.09	31.02	8.99	25.57	36.63	54	-17.37	AV

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Pre-amplifier (dB)	Cable Loss (dB)	Antenna Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
High Channel:2452MHz									
V	4904.00	61.74	30.55	5.77	24.66	61.62	74	-12.38	PK
V	4904.00	43.06	30.55	5.77	24.66	42.94	54	-11.06	AV
V	7356.00	53.45	30.33	6.32	24.55	53.99	74	-20.01	PK
V	7356.00	38.03	30.33	6.32	24.55	38.57	54	-15.43	AV
V	9808.00	51.47	30.85	7.45	24.69	52.76	74	-21.24	PK
V	9808.00	34.85	30.85	7.45	24.69	36.14	54	-17.86	AV
V	12260.00	56.68	31.02	8.99	25.57	60.22	74	-13.78	PK
V	12260.00	38.57	31.02	8.99	25.57	42.11	54	-11.89	AV
H	4904.00	53.91	30.55	5.77	24.66	53.79	74	-20.21	PK
H	4904.00	37.41	30.55	5.77	24.66	37.29	54	-16.71	AV
H	7356.00	51.18	30.33	6.32	24.55	51.72	74	-22.28	PK
H	7356.00	36.92	30.33	6.32	24.55	37.46	54	-16.54	AV
H	9808.00	49.30	30.85	7.45	24.69	50.59	74	-23.41	PK
H	9808.00	34.88	30.85	7.45	24.69	36.17	54	-17.83	AV
H	12260.00	47.53	31.02	8.99	25.57	51.07	74	-22.93	PK
H	12260.00	32.71	31.02	8.99	25.57	36.25	54	-17.75	AV

Remark:
1. Emission Level = Meter Reading + Antenna Factor + Cable Loss – Pre-amplifier,
Margin= Emission Level - Limit
2. If peak below the average limit, the average emission was no test.
3. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

5.RADIATED BAND EMISSIONMEASUREMENT

5.1 TEST REQUIREMENT:

Test Requirement:	FCC Part15 C Section 15.209 and 15.205
Test Method:	ANSI C63.10: 2013
Test Frequency Range:	All of the restrict bands were tested, only the worst band's (2310MHz to 2500MHz) data was showed.
Test site:	Measurement Distance: 3m
Receiver setup:	

Frequency	Detector	RBW	VBW	Value
Above 1GHz	Peak	1MHz	3MHz	Peak
	Average	1MHz	3MHz	Average

LIMITS OF RADIATED EMISSION MEASUREMENT (Above 1000MHz)

FREQUENCY (MHz)	Class B (dBuV/m) (at 3M)	
	PEAK	AVERAGE
Above 1000	74	54

Notes:

(1) The limit for radiated test was performed according to FCC PART 15C.

(2) The tighter limit applies at the band edges.

(3) Emission level (dBuV/m)=20log Emission level (uV/m).

5.2 TEST PROCEDURE

Above 1GHz test procedure as below:

a. 1. The EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter camber. The table was rotated 360 degrees to determine the position of the highest radiation.

b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.

c. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rota table was turned from 0 degrees to 360 degrees to find the maximum reading.

e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dBmargin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

g. Test the EUT in the lowest channel, the Highest channel

Note:

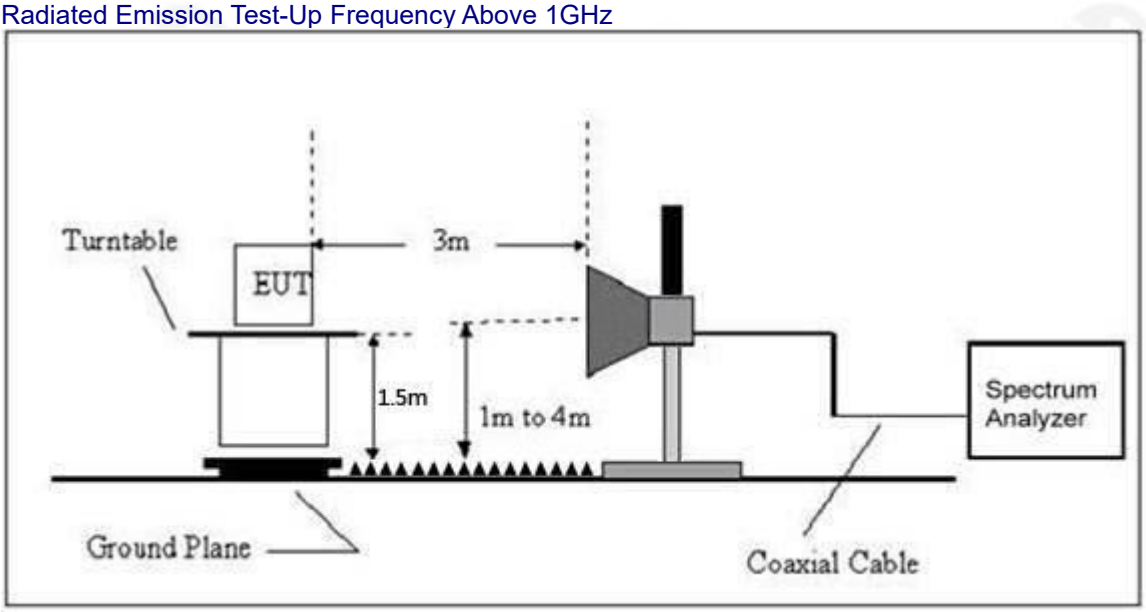
Both horizontal and vertical antenna polarities were tested
and performed pretest to three orthogonal axis. The worst case emissions were reported

5.3 DEVIATION FROM TEST STANDARD

No deviation

5.4 TEST SETUP

Radiated Emission Test-Up Frequency Above 1GHz



5.5 EUT OPERATING CONDITIONS

The EUT tested system was configured as the statements of 2.3 Unless otherwise a special operating condition is specified in the follows during the testing.

5.6 TEST RESULT

	Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Pre-amplifier (dB)	Cable Loss (dB)	Antenna Factor (dB/m)	Emission level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type	Result
802.11b	Low Channel 2412MHz										
	H	2390.00	59.62	30.22	4.85	23.98	58.23	74	-15.77	PK	PASS
	H	2390.00	47.61	30.22	4.85	23.98	46.22	54	-7.78	AV	PASS
	H	2400.00	61.13	30.22	4.85	23.98	59.74	74	-14.26	PK	PASS
	H	2400.00	48.88	30.22	4.85	23.98	47.49	54	-6.51	AV	PASS
	V	2390.00	58.66	30.22	4.85	23.98	57.27	74	-16.73	PK	PASS
	V	2390.00	47.94	30.22	4.85	23.98	46.55	54	-7.45	AV	PASS
	V	2400.00	60.60	30.22	4.85	23.98	59.21	74	-14.79	PK	PASS
	V	2400.00	49.44	30.22	4.85	23.98	48.05	54	-5.95	AV	PASS
	High Channel 2462MHz										
	H	2483.50	58.74	30.22	4.85	23.98	57.35	74	-16.65	PK	PASS
	H	2483.50	47.32	30.22	4.85	23.98	45.93	54	-8.07	AV	PASS
	H	2500.00	61.49	30.22	4.85	23.98	60.1	74	-13.9	PK	PASS
	H	2500.00	49.95	30.22	4.85	23.98	48.56	54	-5.44	AV	PASS
	V	2483.50	59.65	30.22	4.85	23.98	58.26	74	-15.74	PK	PASS
	V	2483.50	48.12	30.22	4.85	23.98	46.73	54	-7.27	AV	PASS
	V	2500.00	58.96	30.22	4.85	23.98	57.57	74	-16.43	PK	PASS
	V	2500.00	47.88	30.22	4.85	23.98	46.49	54	-7.51	AV	PASS
802.11g	Low Channel 2412MHz										
	H	2390.00	59.24	30.22	4.85	23.98	57.85	74	-16.15	PK	PASS
	H	2390.00	47.30	30.22	4.85	23.98	45.91	54	-8.09	AV	PASS
	H	2400.00	60.65	30.22	4.85	23.98	59.26	74	-14.74	PK	PASS
	H	2400.00	47.97	30.22	4.85	23.98	46.58	54	-7.42	AV	PASS
	V	2390.00	58.88	30.22	4.85	23.98	57.49	74	-16.51	PK	PASS
	V	2390.00	47.63	30.22	4.85	23.98	46.24	54	-7.76	AV	PASS
	V	2400.00	60.03	30.22	4.85	23.98	58.64	74	-15.36	PK	PASS
	V	2400.00	49.40	30.22	4.85	23.98	48.01	54	-5.99	AV	PASS
	High Channel 2462MHz										
	H	2483.50	59.37	30.22	4.85	23.98	57.98	74	-16.02	PK	PASS
	H	2483.50	47.88	30.22	4.85	23.98	46.49	54	-7.51	AV	PASS
	H	2500.00	61.90	30.22	4.85	23.98	60.51	74	-13.49	PK	PASS
	H	2500.00	50.48	30.22	4.85	23.98	49.09	54	-4.91	AV	PASS
	V	2483.50	60.24	30.22	4.85	23.98	58.85	74	-15.15	PK	PASS
	V	2483.50	47.98	30.22	4.85	23.98	46.59	54	-7.41	AV	PASS
	V	2500.00	58.58	30.22	4.85	23.98	57.19	74	-16.81	PK	PASS
	V	2500.00	47.31	30.22	4.85	23.98	45.92	54	-8.08	AV	PASS
802.11n20	Low Channel 2412MHz										
	H	2390.00	59.89	30.22	4.85	23.98	58.5	74	-15.5	PK	PASS
	H	2390.00	47.10	30.22	4.85	23.98	45.71	54	-8.29	AV	PASS
	H	2400.00	61.15	30.22	4.85	23.98	59.76	74	-14.24	PK	PASS
	H	2400.00	48.68	30.22	4.85	23.98	47.29	54	-6.71	AV	PASS
	V	2390.00	58.78	30.22	4.85	23.98	57.39	74	-16.61	PK	PASS
	V	2390.00	47.42	30.22	4.85	23.98	46.03	54	-7.97	AV	PASS
	V	2400.00	60.76	30.22	4.85	23.98	59.37	74	-14.63	PK	PASS
	V	2400.00	49.44	30.22	4.85	23.98	48.05	54	-5.95	AV	PASS
	High Channel 2462MHz										
	H	2483.50	58.54	30.22	4.85	23.98	57.15	74	-16.85	PK	PASS
	H	2483.50	47.23	30.22	4.85	23.98	45.84	54	-8.16	AV	PASS
	H	2500.00	61.10	30.22	4.85	23.98	59.71	74	-14.29	PK	PASS
	H	2500.00	50.74	30.22	4.85	23.98	49.35	54	-4.65	AV	PASS
	V	2483.50	60.32	30.22	4.85	23.98	58.93	74	-15.07	PK	PASS
	V	2483.50	48.95	30.22	4.85	23.98	47.56	54	-6.44	AV	PASS
	V	2500.00	58.55	30.22	4.85	23.98	57.16	74	-16.84	PK	PASS

	V	2500.00	47.26	30.22	4.85	23.98	45.87	54	-8.13	AV	PASS
802.11n40	Low Channel 2422MHz										
	H	2390.00	59.88	30.22	4.85	23.98	58.49	74	-15.51	PK	PASS
	H	2390.00	47.25	30.22	4.85	23.98	45.86	54	-8.14	AV	PASS
	H	2400.00	61.36	30.22	4.85	23.98	59.97	74	-14.03	PK	PASS
	H	2400.00	48.88	30.22	4.85	23.98	47.49	54	-6.51	AV	PASS
	V	2390.00	58.79	30.22	4.85	23.98	57.4	74	-16.6	PK	PASS
	V	2390.00	47.33	30.22	4.85	23.98	45.94	54	-8.06	AV	PASS
	V	2400.00	60.81	30.22	4.85	23.98	59.42	74	-14.58	PK	PASS
	V	2400.00	49.63	30.22	4.85	23.98	48.24	54	-5.76	AV	PASS
	High Channel 2452MHz										
	H	2483.50	58.67	30.22	4.85	23.98	57.28	74	-16.72	PK	PASS
	H	2483.50	47.36	30.22	4.85	23.98	45.97	54	-8.03	AV	PASS
	H	2500.00	61.13	30.22	4.85	23.98	59.74	74	-14.26	PK	PASS
	H	2500.00	50.85	30.22	4.85	23.98	49.46	54	-4.54	AV	PASS
	V	2483.50	60.23	30.22	4.85	23.98	58.84	74	-15.16	PK	PASS
	V	2483.50	49.05	30.22	4.85	23.98	47.66	54	-6.34	AV	PASS
	V	2500.00	58.65	30.22	4.85	23.98	57.26	74	-16.74	PK	PASS
	V	2500.00	47.58	30.22	4.85	23.98	46.19	54	-7.81	AV	PASS

Remark:

1. Emission Level = Meter Reading + Antenna Factor + Cable Loss – Pre-amplifier, Margin= Emission Level - Limit

6.POWER SPECTRAL DENSITY TEST

Test Requirement:	FCC Part15 C Section 15.247 (e)
Test Method:	KDB558074 D0115.247 Meas Guidancev05r02

6.1 APPLIED PROCEDURES / LIMIT

FCC Part15 (15.247) , Subpart C				
Section	Test Item	Limit	Frequency Range (MHz)	Result
15.247	Power Spectral Density	8dBm/3kHz	2400-2483.5	PASS

6.2 TEST PROCEDURE

1. Set analyzer center frequency to DTS channel center frequency.
2. Set the span to 1.5 times the DTS bandwidth.
3. Set the RBW to: 3 kHz ≤ RBW ≤ 100 kHz.
4. Set the VBW ≥ 3 x RBW.
5. Detector = peak.
6. Sweep time = auto couple.
7. Trace mode = max hold.
8. Allow trace to fully stabilize.
9. Use the peak marker function to determine the maximum amplitude level within the RBW.
10. If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

6.3 DEVIATION FROM STANDARD

No deviation.

6.4 TEST SETUP

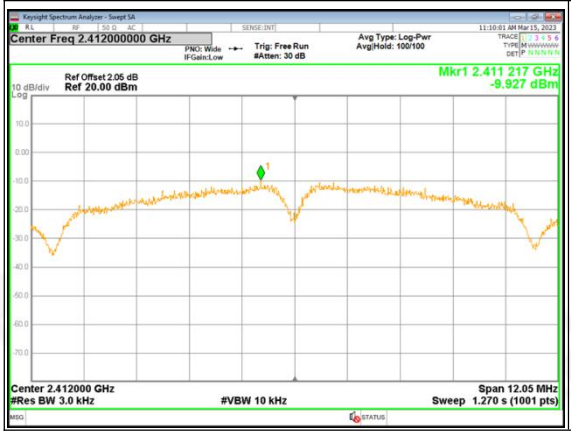
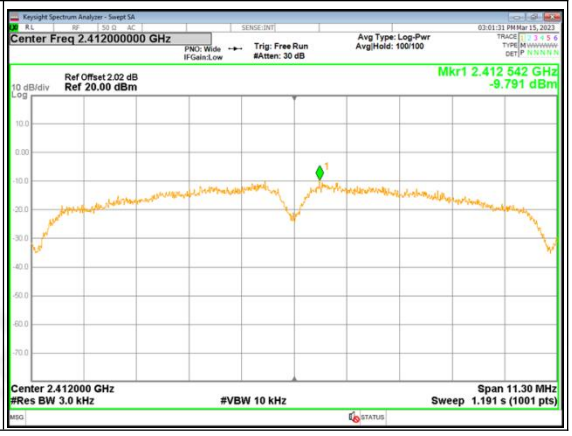
6.5 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.1 Unless otherwise a special operating condition is specified in the follows during the testing.

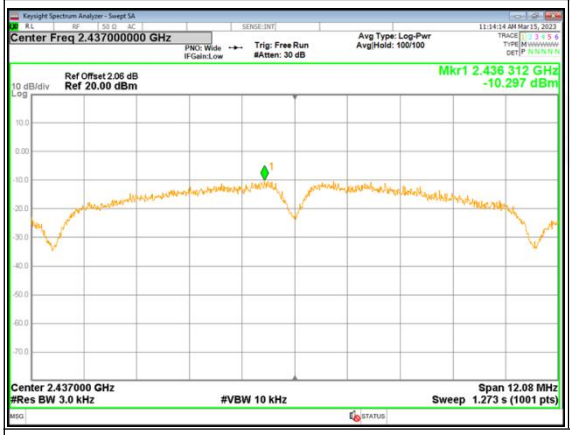
6.6 TEST RESULT

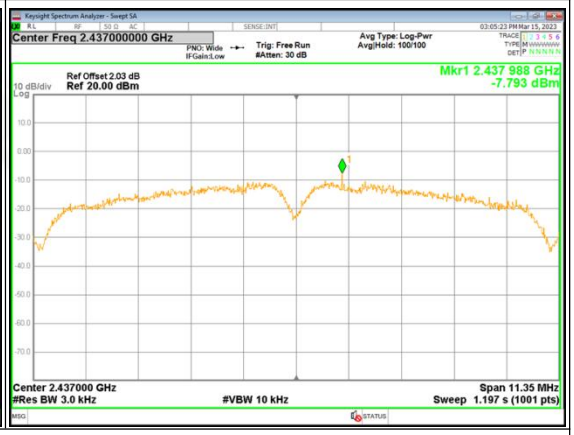
Temperature :	25.4℃	Relative Humidity :	52%
Pressure :	101kPa	Test Voltage :	DC 12V
Test Mode :	TX b Mode		

Frequency	Power Spectral Density (dBm/3kHz) ANT1	Power Spectral Density (dBm/3kHz) ANT2	Limit (dBm/3kHz)	Result
2412 MHz	-9.93	-9.79	8	PASS
2437 MHz	-10.3	-7.79	8	PASS
2462 MHz	-9.81	-9.25	8	PASS

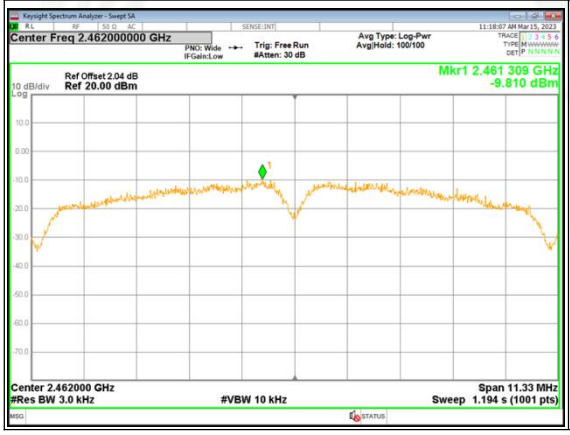
ANT1	ANT2
TX CH01	
	

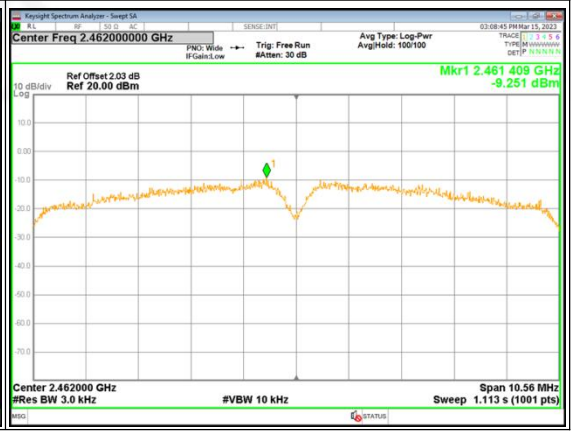
TX CH06





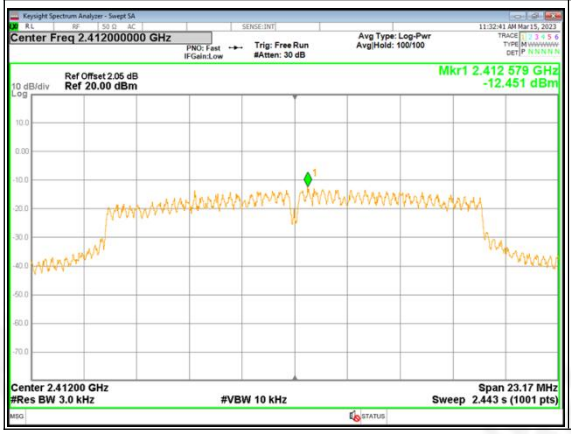
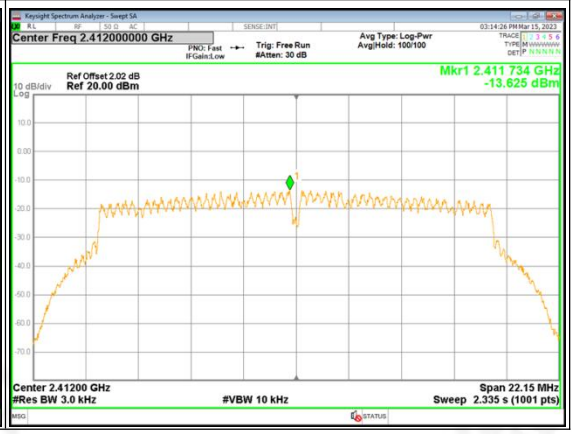
TX CH11





Temperature :	25.4℃	Relative Humidity :	47%
Pressure :	101kPa	Test Voltage :	DC 12V
Test Mode :	TX g Mode		

Frequency	Power Spectral Density (dBm/3kHz) ANT1	Power Spectral Density (dBm/3kHz) ANT2	Limit (dBm/3kHz)	Result
2412 MHz	-12.45	-13.63	8	PASS
2437 MHz	-12.25	-9.94	8	PASS
2462 MHz	-13.33	-13.29	8	PASS

ANT1	ANT2
TX CH01	
	

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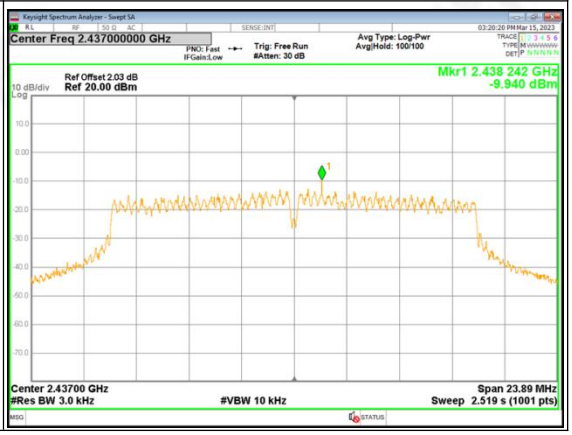
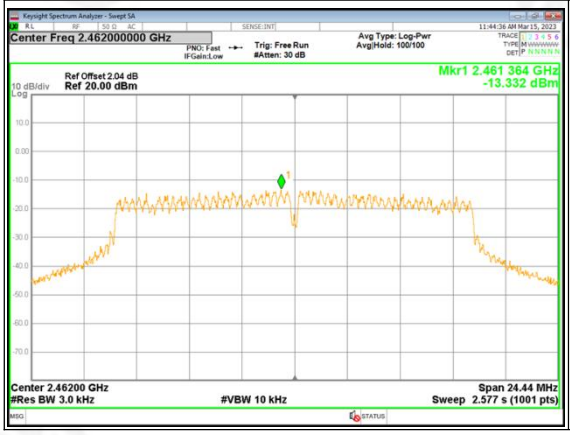
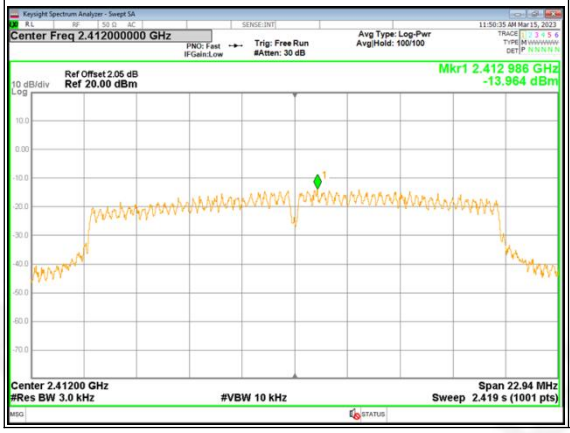
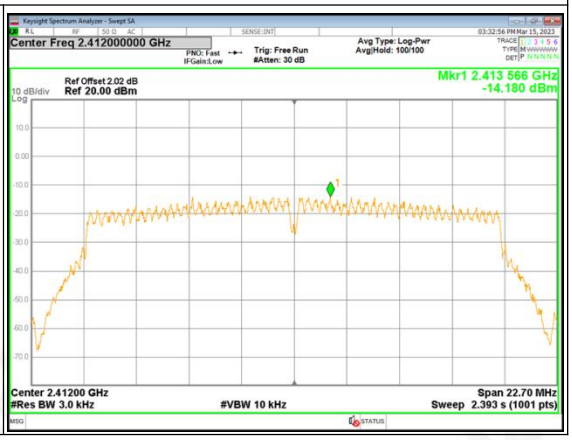


TX CH11

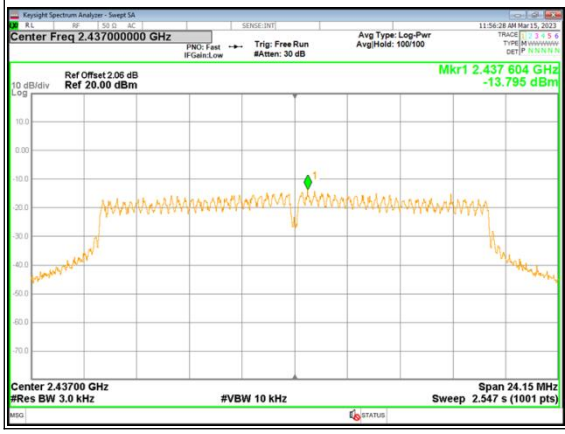


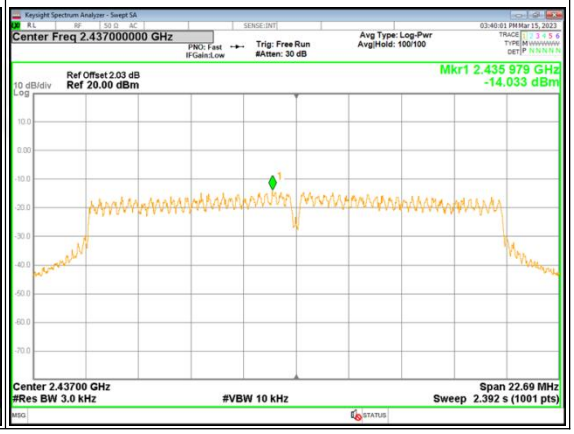
Temperature：	25.4℃	Relative Humidity：	47%
Pressure：	101kPa	Test Voltage ：	DC 12V
Test Mode ：	TX n Mode(20M)		

Frequency	Power Spectral Density (dBm/3kHz) ANT1	Power Spectral Density (dBm/3kHz) ANT2	Limit (dBm/3kHz)	Result
2412 MHz	-13.96	-14.18	8	PASS
2437 MHz	-13.8	-14.03	8	PASS
2462 MHz	-14.17	-13.26	8	PASS

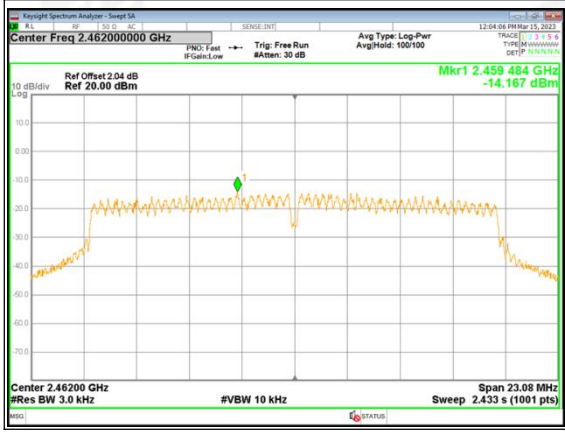
ANT1	ANT2
TX CH01	
	

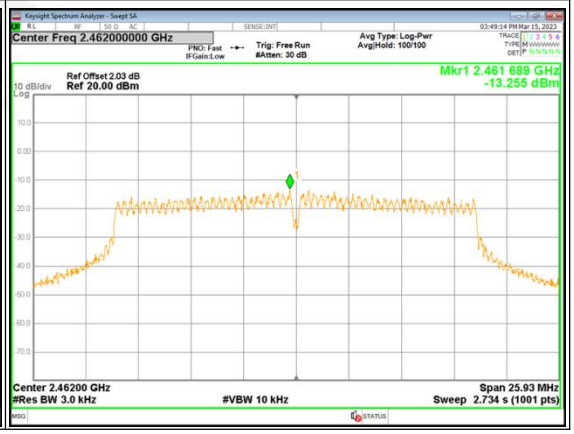
TX CH06





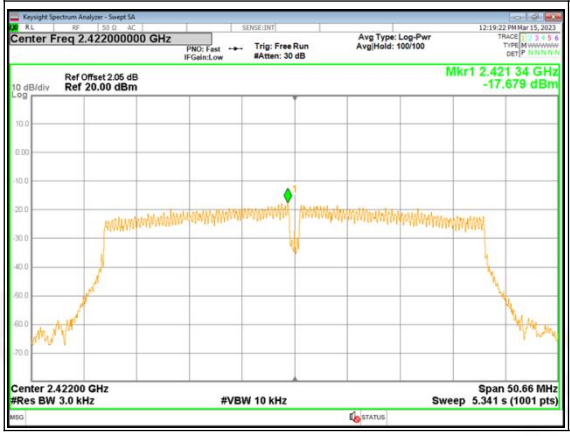
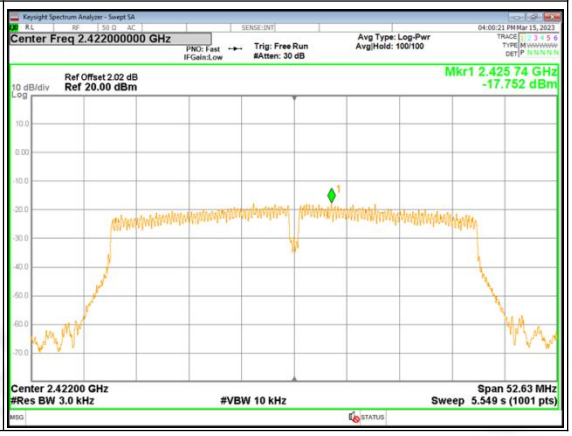
TX CH11



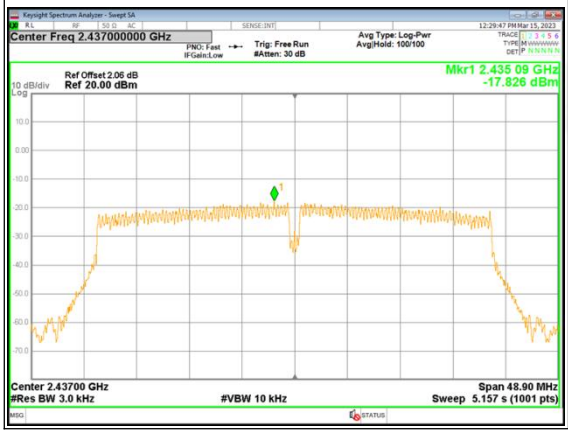


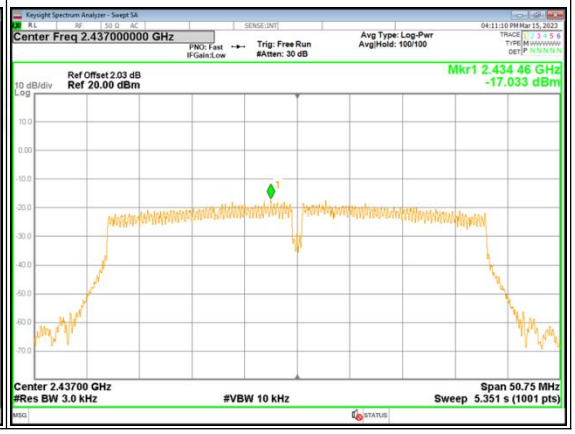
Temperature :	25.4℃	Relative Humidity :	47%
Pressure :	101kPa	Test Voltage :	DC 12V
Test Mode :	TX n Mode(40M)		

Frequency	Power Spectral Density (dBm/3kHz) ANT1	Power Spectral Density (dBm/3kHz) ANT2	Limit (dBm/3kHz)	Result
2422 MHz	-17.68	-17.75	8	PASS
2437 MHz	-17.83	-17.03	8	PASS
2452 MHz	-17.29	-17.00	8	PASS

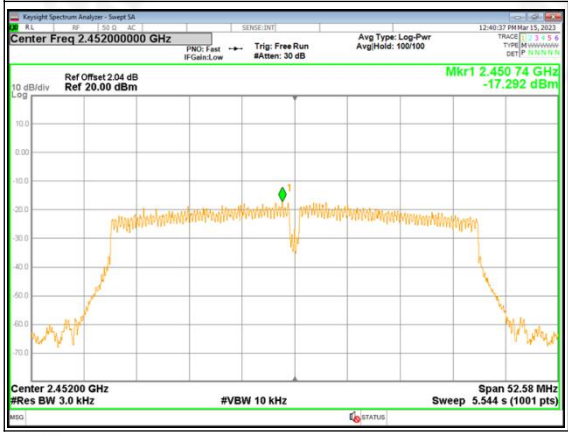
ANT1	ANT2
TX CH03	
	

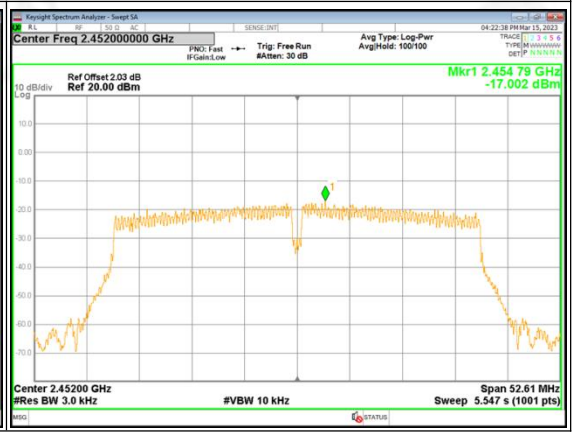
TX CH06





TX CH09





Test mode	Frequency	Power Spectral Density (dBm/3kHz) ANT1	Power Spectral Density (mW) ANT1	Power Spectral Density (dBm/3kHz) ANT2	Power Spectral Density (mW) ANT2	PSD MIMO (mW)	PSD MIMO (dBm/3kHz)	Limit (dBm/3kHz)	Result
802.11n20	2412MHz	-13.96	0.0402	-14.18	0.0382	0.0784	-28.14	8	Pass
	2437MHz	-13.80	0.0417	-14.03	0.0395	0.0812	-27.83	8	Pass
	2462MHz	-14.17	0.0383	-13.26	0.0472	0.0855	-27.43	8	Pass
802.11n40	2422MHz	-17.68	0.0171	-17.75	0.0168	0.0339	-35.43	8	Pass
	2437MHz	-17.83	0.0165	-17.03	0.0198	0.0363	-34.86	8	Pass
	2452MHz	-17.29	0.0187	-17.00	0.0200	0.0387	-34.29	8	Pass

Note:1. PSD MIMO=Power Spectral Density(mW) ANT1+Power Spectral Density(mW) ANT2

2. Directional Gain = GANT+10*log(NANT)dBi=2.18+10*log(2)dBi=5.19dBi

7. CHANNEL BANDWIDTH& 99% OCCUPY BANDWIDTH

Test Requirement:	FCC Part15 C Section 15.247 (a)(2)
Test Method:	KDB558074 D0115.247 Meas Guidancev05r02

7.1 APPLIED PROCEDURES / LIMIT

FCC Part15 (15.247) , Subpart C				
Section	Test Item	Limit	Frequency Range (MHz)	Result
15.247(a)(2)	Bandwidth	>= 500KHz (6dB bandwidth)	2400-2483.5	PASS

7.2 TEST PROCEDURE

1. Set RBW = 100 kHz.
2. Set the video bandwidth (VBW) ≥ 3 xRBW.
3. Detector = Peak.
4. Trace mode = max hold.
5. Sweep = auto couple.
6. Allow the trace to stabilize.
7. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

7.3 DEVIATION FROM STANDARD

No deviation.

7.4 TEST SETUP

7.5 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

7.6 TEST RESULT

Temperature :	25.4℃	Relative Humidity :	52%
Pressure :	101kPa	Test Voltage :	DC 12V
Test Mode :	TX Mode		

ANT1						
Test CH	-6dB Occupy Bandwidth (MHz)					
	802.11b	802.11g	802.11n(HT20)	802.11n(HT 40)	Limit(KHz)	Result
Lowest	8.031	15.446	15.293	33.77	>500	Pass
Middle	8.051	16.048	16.102	32.603		
Highest	7.551	16.296	15.386	35.055		

ANT1						
Test CH	-6dB Occupy Bandwidth (MHz)					
	802.11b	802.11g	802.11n(HT20)	802.11n(HT 40)	Limit(KHz)	Result
Lowest	7.53	14.764	15.132	35.084	>500	Pass
Middle	7.569	15.929	15.124	33.832		
Highest	7.04	15.487	17.285	35.071		

ANT1					
Test CH	99% Occupy Bandwidth (MHz)				Result
	802.11b	802.11g	802.11n(HT20)	802.11n(HT40)	
Lowest	12.478	17.279	17.658	35.9	Pass
Middle	12.54	16.676	17.813	35.935	
Highest	12.515	16.592	17.788	35.92	

ANT2					
Test CH	99% Occupy Bandwidth (MHz)				Result
	802.11b	802.11g	802.11n(HT20)	802.11n(HT40)	
Lowest	12.199	16.327	17.514	35.942	Pass
Middle	12.312	16.634	17.829	35.976	
Highest	12.309	16.653	17.808	35.905	

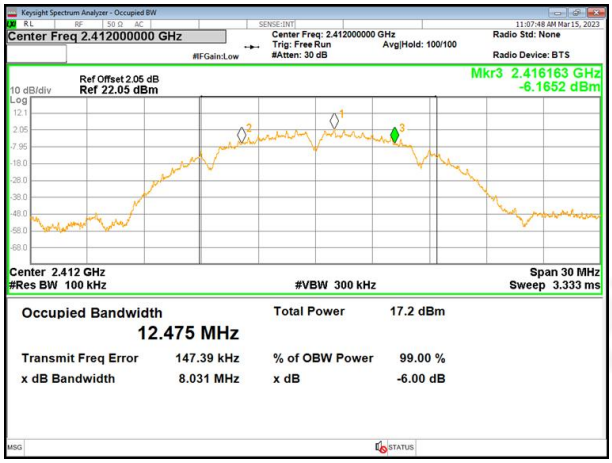
Test plot as follows:

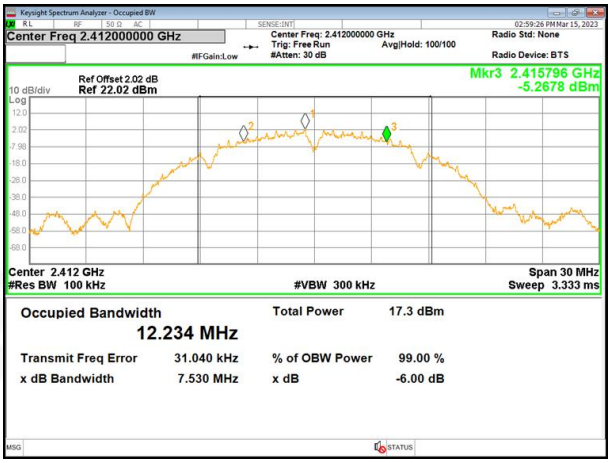
-6dB Occupy Bandwidth

ANT1 ANT2

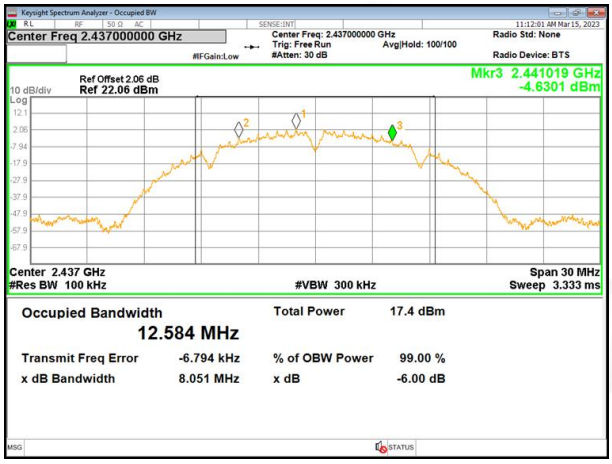
802.11b

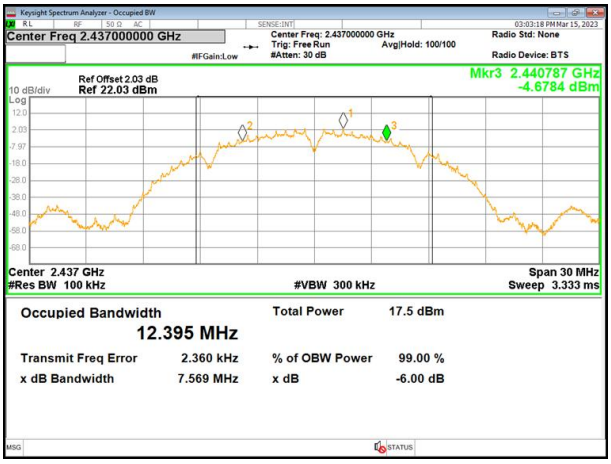
Lowest channel



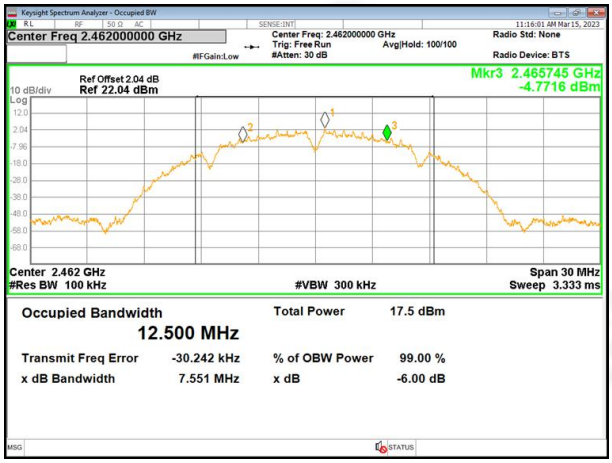


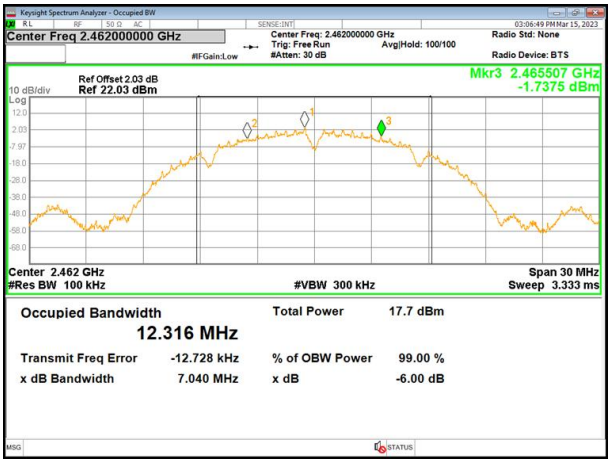
Middle channel





Highest channel



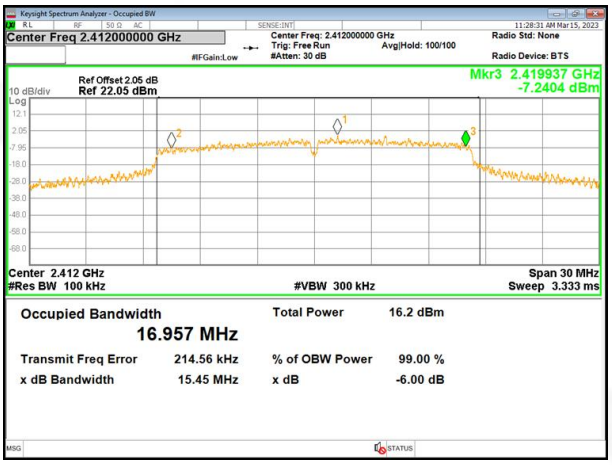


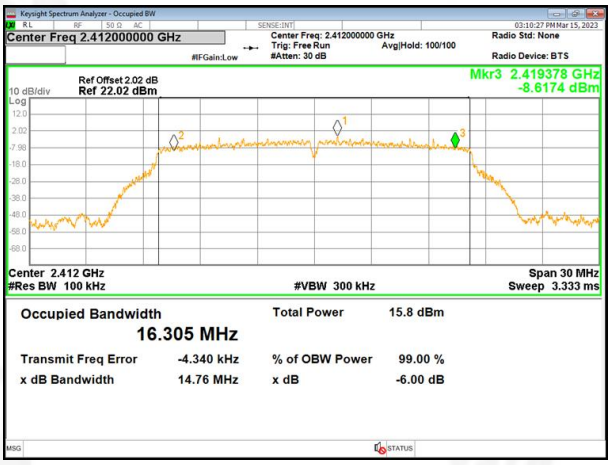
-6dB Occupy Bandwidth

ANT1 ANT2

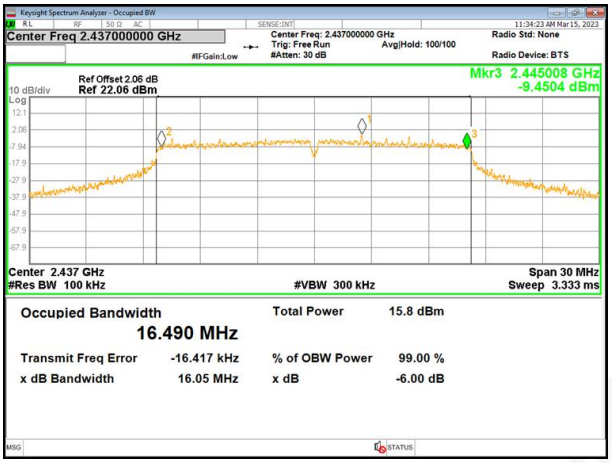
802.11g

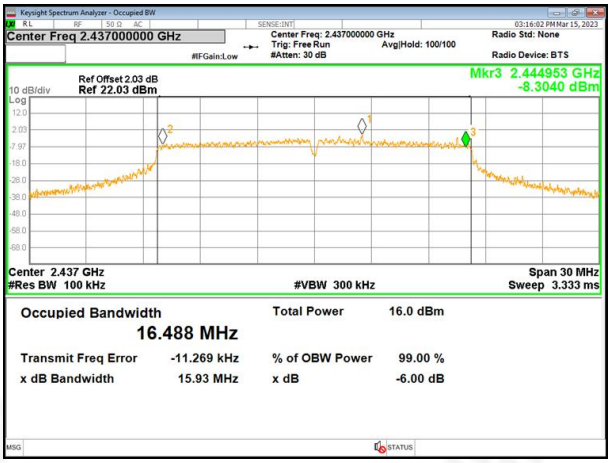
Lowest channel



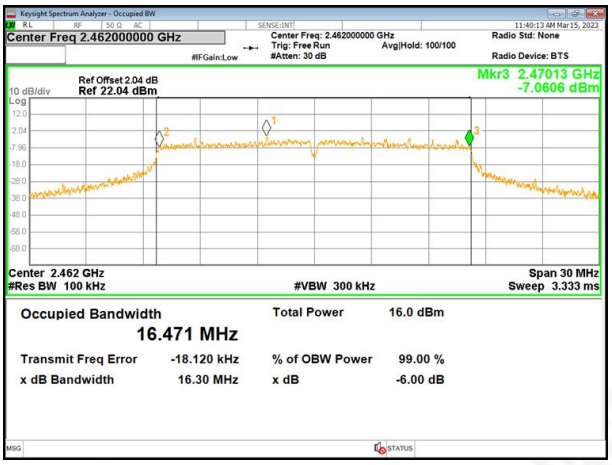


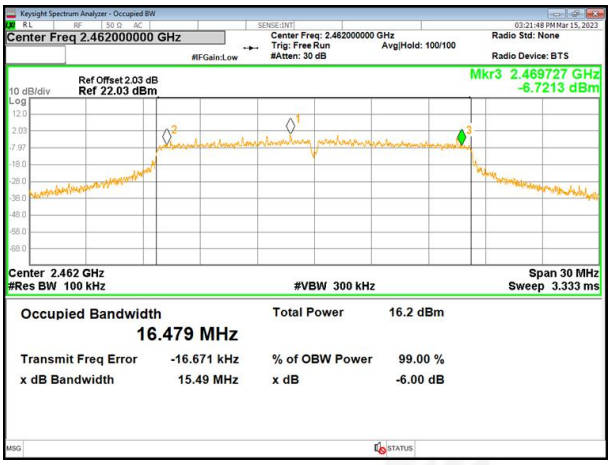
Middle channel





Highest channel



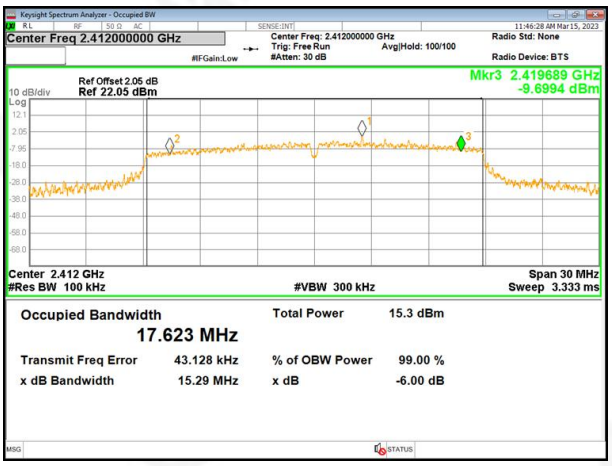


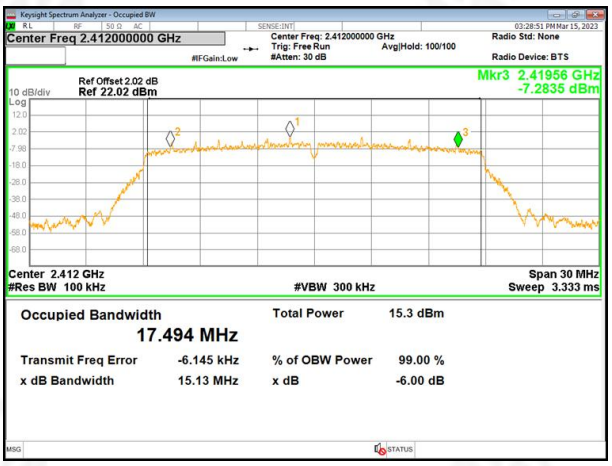
-6dB Occupy Bandwidth

ANT1 ANT2

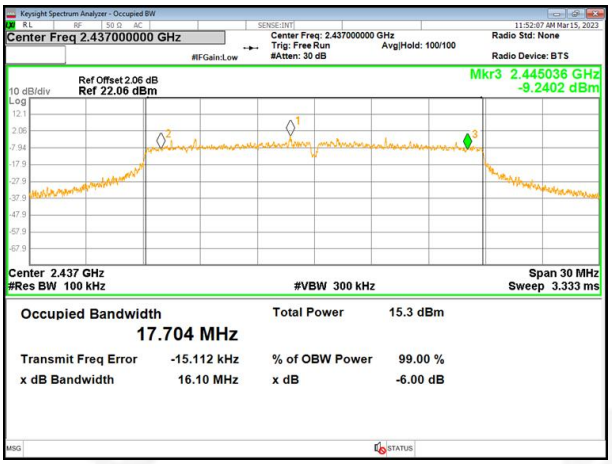
802.11n20

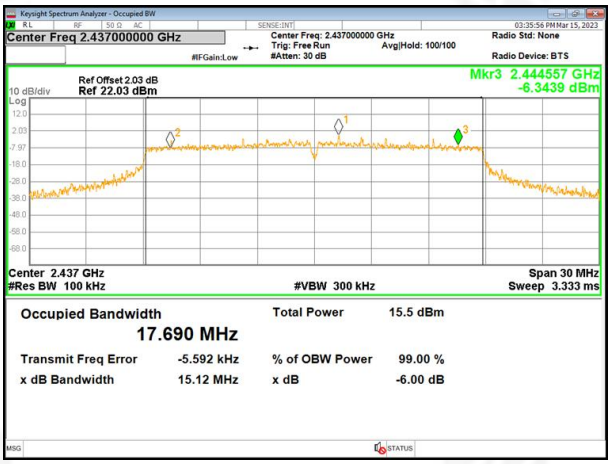
Lowest channel



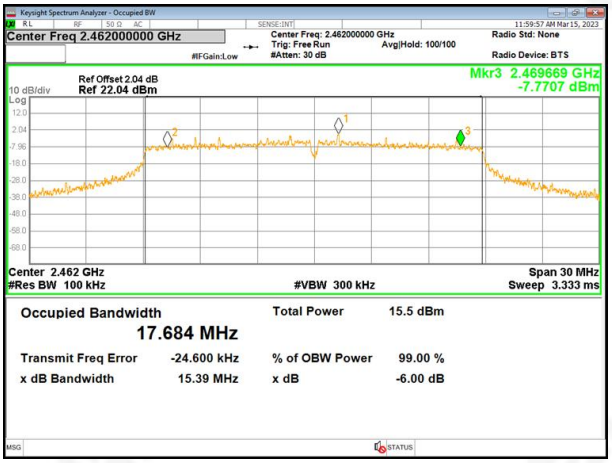


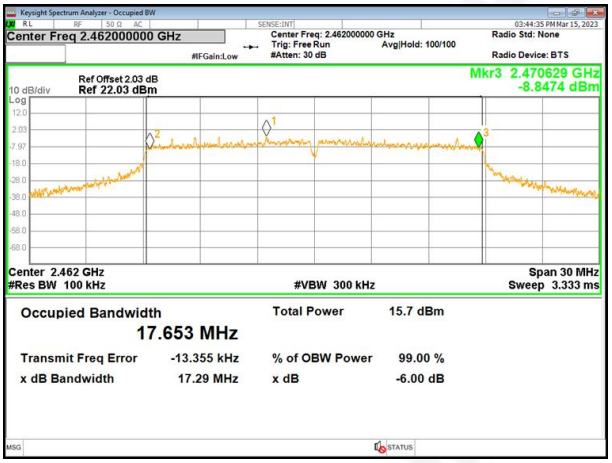
Middle channel





Highest channel



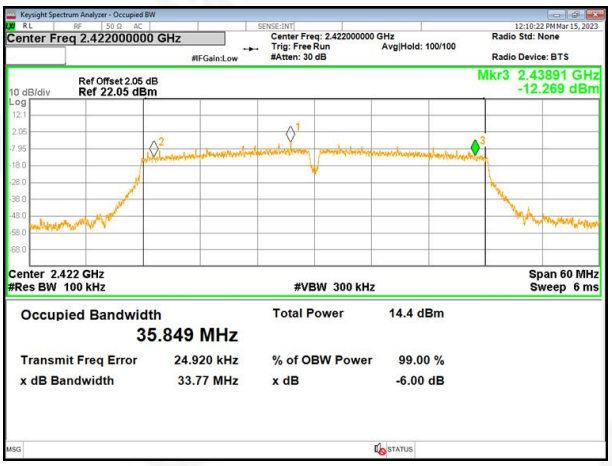


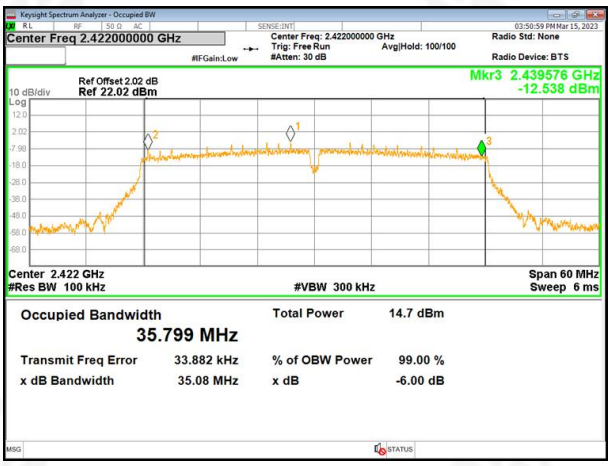
-6dB Occupy Bandwidth

ANT1 ANT2

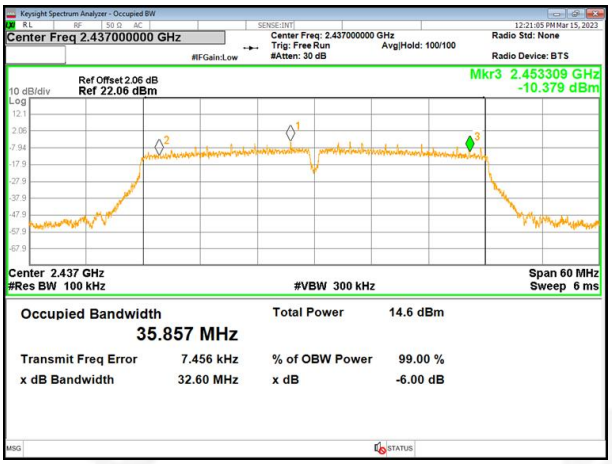
802.11n40

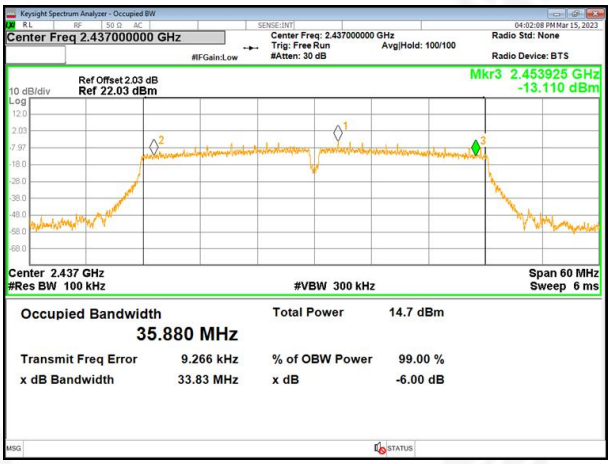
Lowest channel



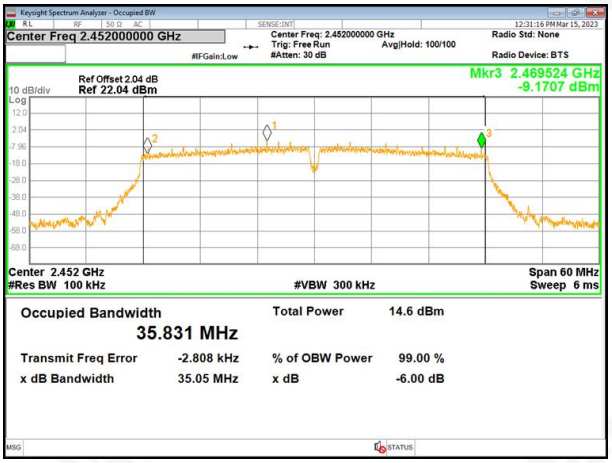


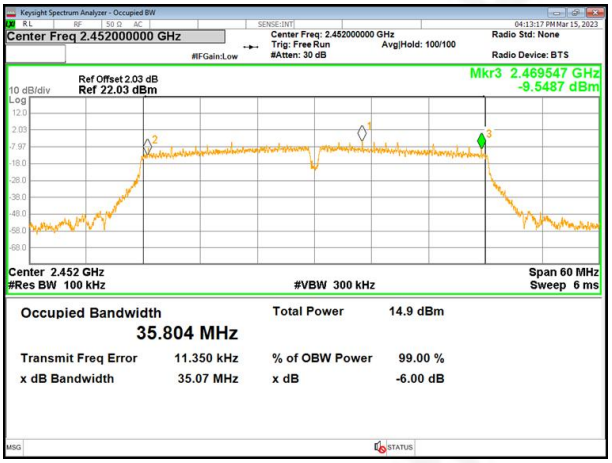
Middle channel





Highest channel



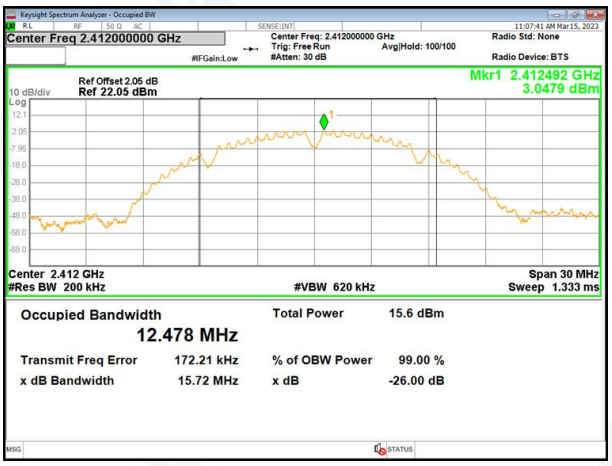


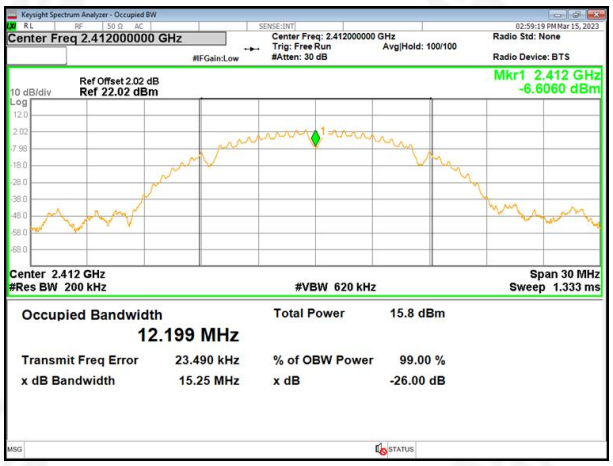
99% Occupy Bandwidth

ANT1 ANT2

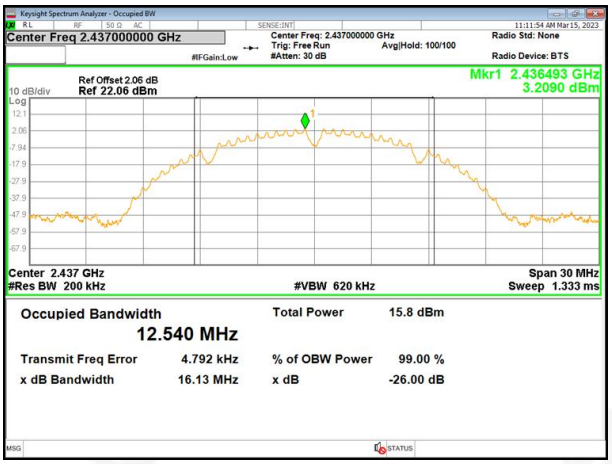
802.11b

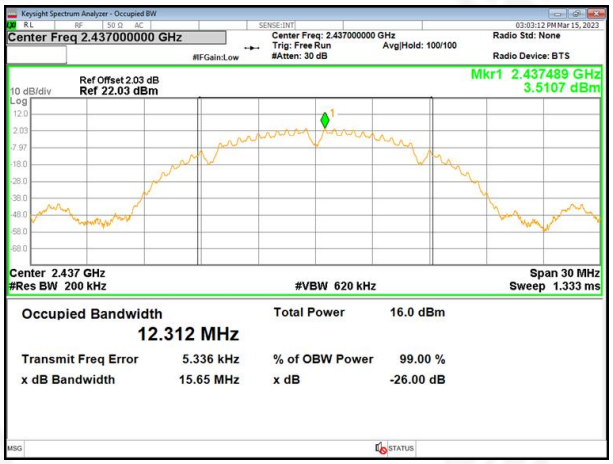
Lowest channel



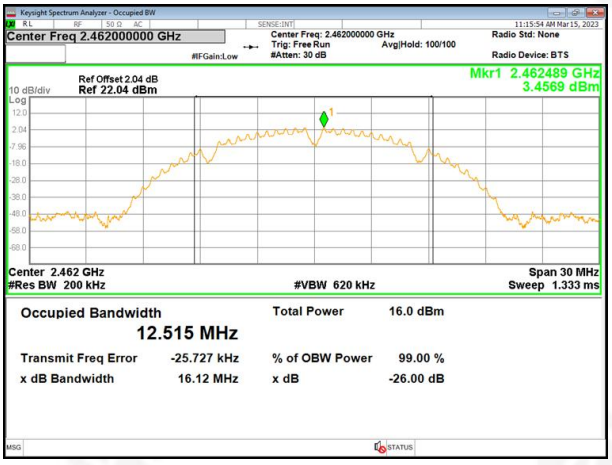


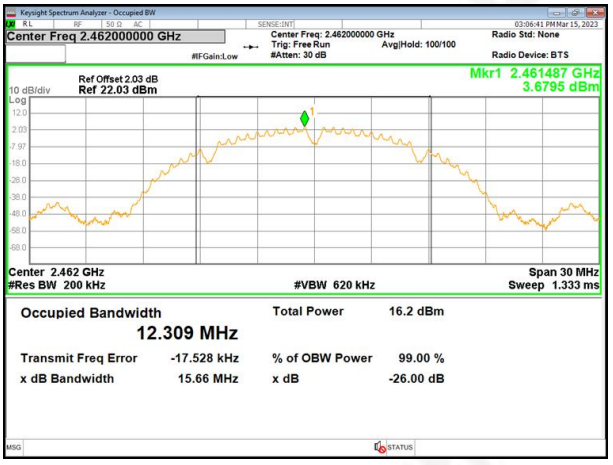
Middle channel





Highest channel



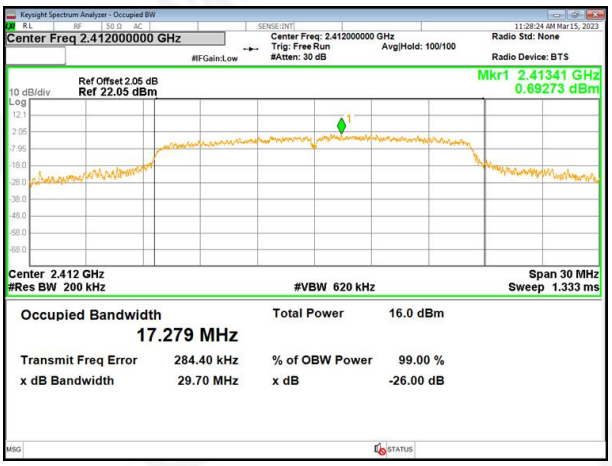


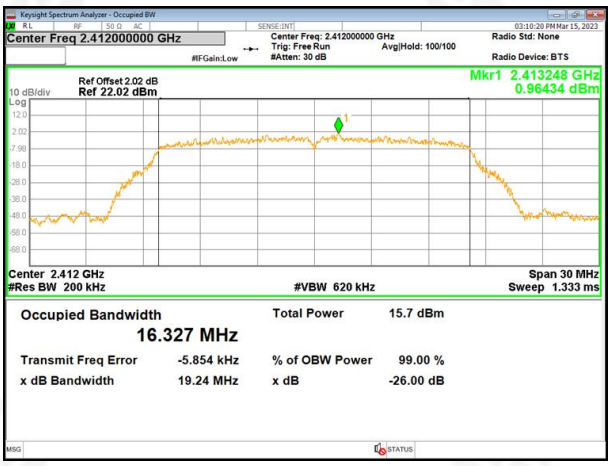
99% Occupy Bandwidth

ANT1 ANT2

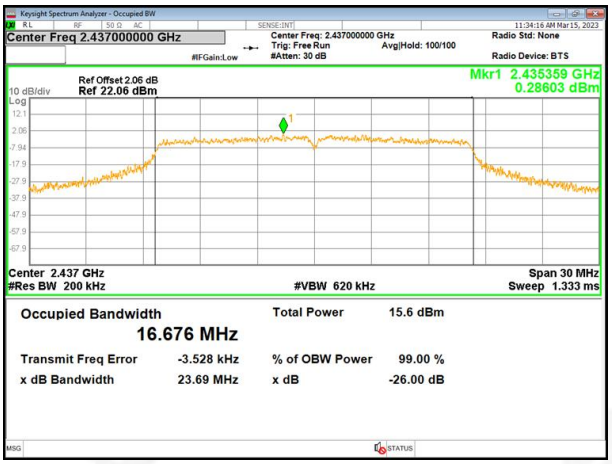
802.11g

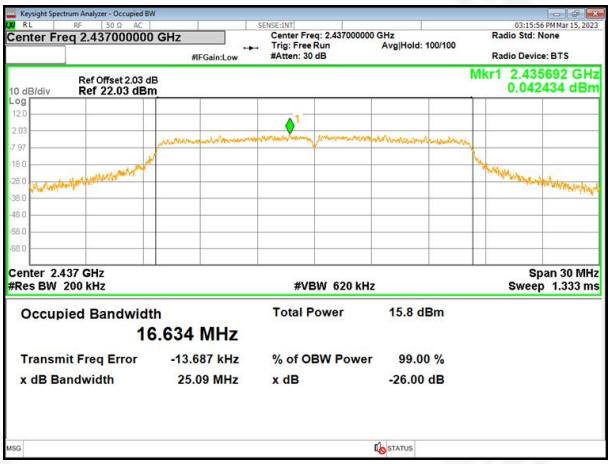
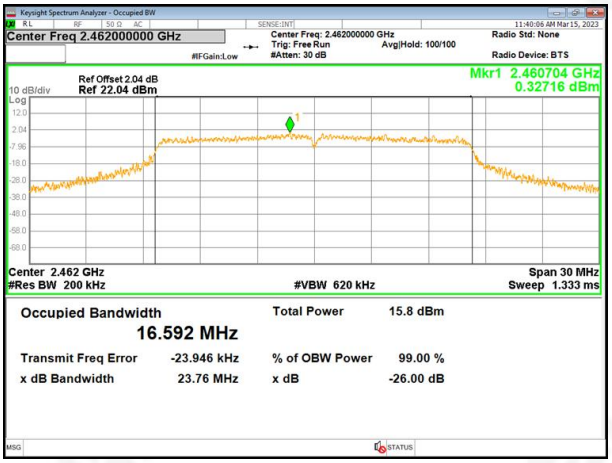
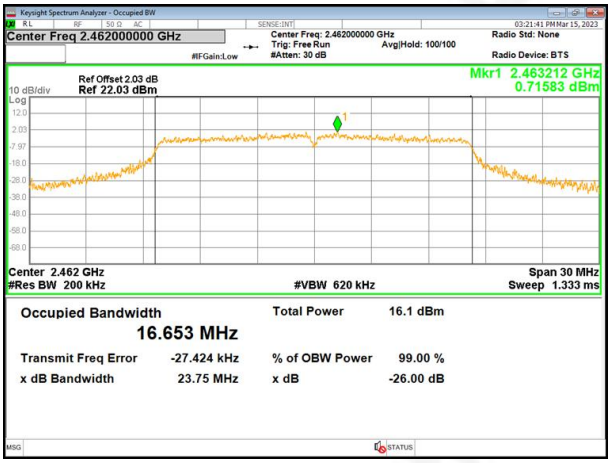
Lowest channel





Middle channel





Highest channel