NVLAP TESTING
NVLAP LAB CODE 600341-0

BACL Bay Area Compliance Labs Corp.

TEST REPORT

Applicant: **Sveaverken Software Development (Shanghai) Co., Ltd.**

Address: **Room 1408-1, No. 758, Nanjing West Road, Jing'an District, Shanghai, China**

Product Name: **Auto Steer System**

FCC ID: **2BOPT-F200MAX**

Standard(s): **47 CFR Part 15, Subpart C (15.247)**
ANSI C63.10-2020
KDB 558074 D01 15.247 Meas Guidance v05r02

Report Number: **2502S52446E-RF-00C**

Report Date: **2025/6/5**

The above device has been tested and found compliant with the requirement of the relative standards by Bay Area Compliance Laboratories Corp. (Dongguan).

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DOCUMENT REVISION HISTORY

Revision Number	Report Number	Description of Revision	Date of Revision
1.0	2502S52446E-RF-00C	Original Report	2025/6/5

1. GENERAL INFORMATION

1.1 Product Description for Equipment under Test (EUT)

EUT Name:	Auto Steer System
Trade Name:	Sveaverken
EUT Model:	F200 Max
Operation Frequency:	2412-2462MHz (802.11b/g/n ht20) 2422-2452MHz (802.11n ht40)
Maximum Peak Output Power (Conducted):	24.01dBm
Modulation Type:	802.11b: DSSS-DBPSK, DQPSK, CCK 802.11g/n: OFDM-BPSK, QPSK, 16QAM, 64QAM
Rated Input Voltage:	DC9-36V Typical voltage：DC 12V
Serial Number:	314Y-1 (for Radiated Emissions Test) 314Y-2 (for RF Conducted Test)
EUT Received Date:	2025/4/9
EUT Received Status:	Good

1.2 Accessory Information

Accessory Description	Manufacturer	Model	Parameters
Control Terminal	Sveaverken	T3	Supply Voltage: 9-36VDC
GNSS Receiver	Sveaverken	G2	Operating Voltage: 9-36VDC
Electric Steering Wheel	Sveaverken	M2	Power Supply: 12VDC or 24VDC
Main Power Cable	Sveaverken	/	Unshielded without ferrite, 4.5Meter
Main Wiring Harnes (With Switch Key)	Sveaverken	/	Unshielded without ferrite, 6.0Meter
Spare Main Wiring Harness	Sveaverken	/	Unshielded without ferrite, 2.0Meter
GNSS Receiver Wiring Harness	Sveaverken	/	Unshielded without ferrite, 4.5Meter
Angle Sensor (With Wiring Harness)	Sveaverken	/	Unshielded without ferrite, 3.0Meter
Radio Antenna (With Coaxial Harness)	Sveaverken	/	Unshielded without ferrite, 4.5Meter
Camera #1 (With Wiring Harness)	Sveaverken	WC02	Unshielded without ferrite, 3.0Meter
Camera #2 (With Wiring Harness)	Sveaverken	WC03	Unshielded without ferrite, 3.0Meter

1.3 Antenna Information Detail▲

Antenna	Antenna Type	Input Impedance (Ohm)	Frequency Range	Antenna Gain
Chain 0 (Antenna 1)	FPC	50	2400~2480MHz	4.9dBi
Chain 1 (Antenna 2)	FPC	50	2400~2480MHz	6.3dBi
The design of compliance with §15.203:				
☒ Unit uses a permanently attached antenna. ☐ Unit uses a unique coupling to the intentional radiator. ☐ Unit was professionally installed, and installer shall be responsible for verifying that the correct antenna is employed with the unit.				

1.4 Equipment Modifications

No modifications are made to the EUT during all test items.

2. SUMMARY OF TEST RESULTS

Standard(s) Section	Test Items	Result
§15.207(a)	AC Line Conducted Emissions	Not Applicable
§15.205, §15.209, §15.247(d)	Radiated Spurious Emissions	Compliant
§15.247 (a)(2)	Minimum 6 dB Bandwidth	Compliant
§15.247(b)(3)	Maximum Conducted Output Power	Compliant
§15.247(d)	100 kHz Bandwidth of Frequency Band Edge	Compliant
§15.247(e)	Power Spectral Density	Compliant
§15.203	Antenna Requirement	Compliant
Note 1: Not Applicable, the EUT is a vehicle-mounted device, not applicable for this test item. Note 2: For Radiated Spurious Emissions 9kHz~1GHz and 18~25GHz, the maximum peak output power mode and channel was tested.		

3. DESCRIPTION OF TEST CONFIGURATION

3.1 Operation Frequency Detail

For 802.11b/g/n ht20:

Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	**2412**	7	2442
2	2417	8	2447
3	2422	9	2452
4	2427	10	2457
5	2432	11	**2462**
6	**2437**	/	/

For 802.11n ht40:

Channel	Frequency (MHz)	Channel	Frequency (MHz)
3	**2422**	7	2442
4	2427	8	2447
5	2432	9	**2452**
6	**2437**	/	/

Note: The above frequencies in bold were performed the test.

3.2 EUT Operation Condition

The EUT was configured for testing in Engineering Mode, which was provided by the manufacturer. The EUT configuration as below:

EUT Operation Mode:	The system was configured for testing in Engineering Mode, which was provided by the manufacturer.
Equipment Modifications:	No
EUT Exercise Software:	cmd.exe

The software was provided by manufacturer. The maximum power was configured as below, that was provided by the manufacturer▲:

Test Modes	Test Frequency (MHz)	Data Rate	Power Level Setting	
			Chain 0	Chain 1
802.11b	2412	1Mbps	70	70
	2437	1Mbps	65	65
	2462	1Mbps	65	65
802.11g	2412	6Mbps	65	65
	2437	6Mbps	65	65
	2462	6Mbps	65	65
802.11n ht20	2412	MCS0	60	60
	2437	MCS0	60	60
	2462	MCS0	60	60
802.11n ht40	2422	MCS0	70	70
	2437	MCS0	70	70
	2452	MCS0	70	70

Note:
1. The above are the worst-case data rates, which are determined for each mode based upon investigations by measuring the power and PSD across all data rates, bandwidths, and modulations.
2. The device supports SISO in all modes and MIMO in 802.11n modes, per pretest, MIMO mode was the worst mode and reported for 802.11n modes.

3.3 Support Equipment List and Details

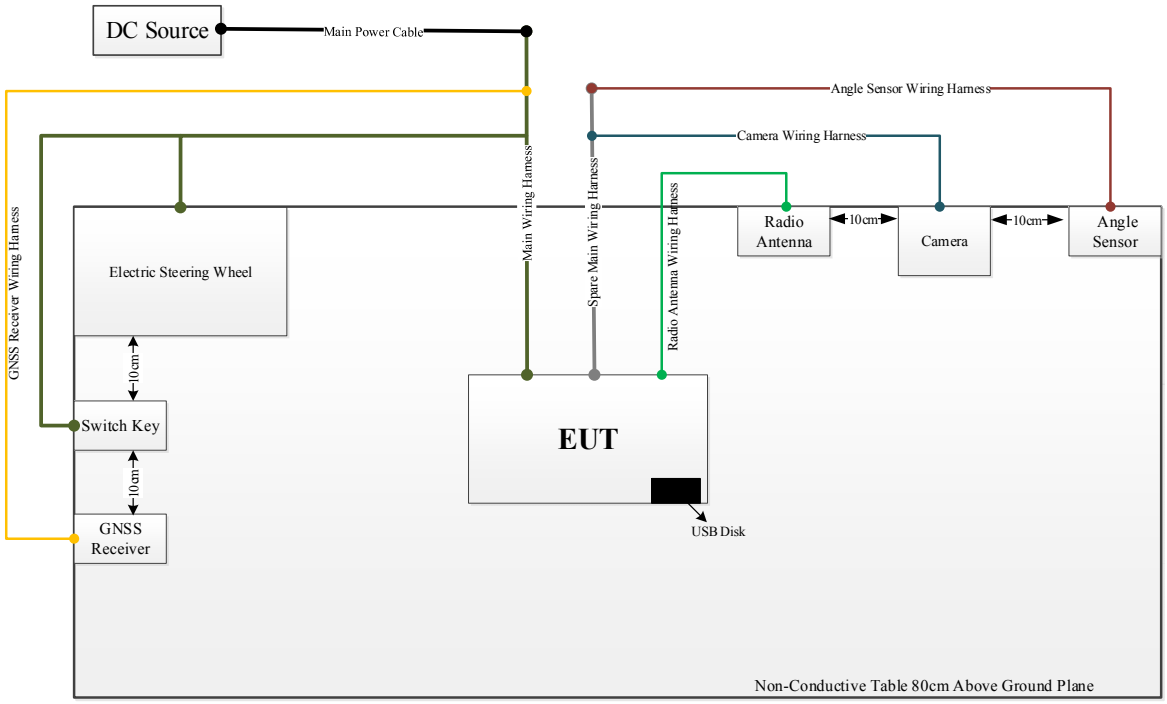
Manufacturer	Description	Model	Serial Number
DK	DC Source	DK-60V50A	T-08-EE140
SANDisk	USB Flash Disk	16G	BL201026115 B

3.4 Support Cable List and Details

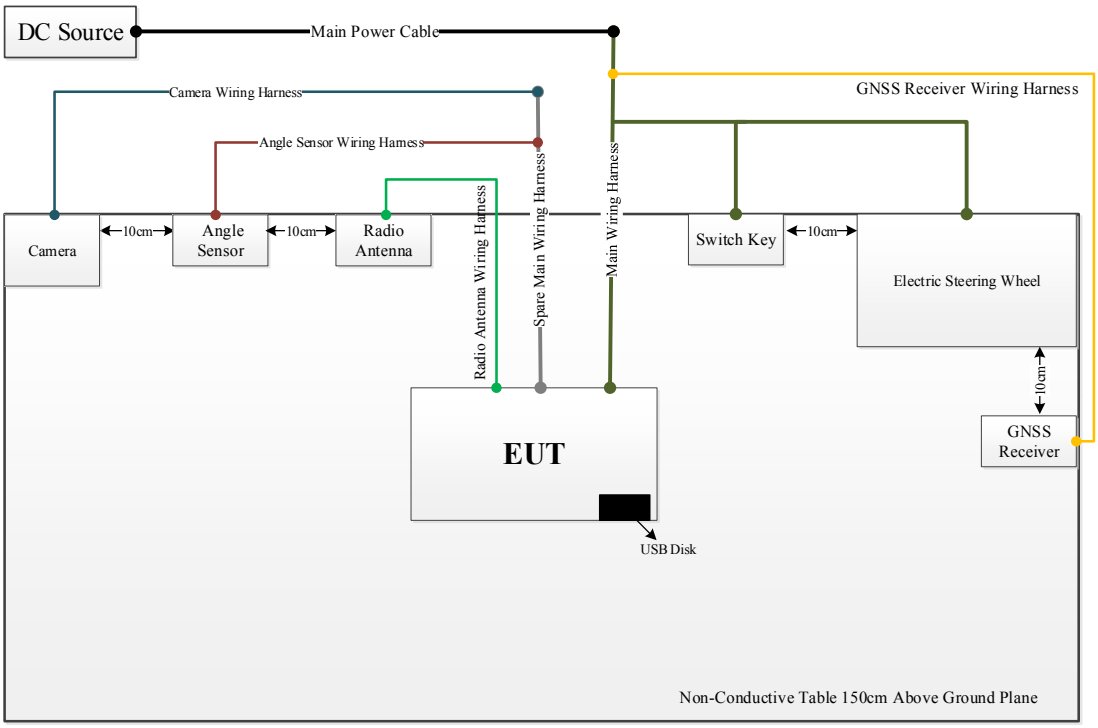
Cable Description	Shielding Type	Ferrite Core	Length (m)	From Port	To
Main Power Cable	No	No	4.5	DC Source	Main Wiring Harness
Main Wiring Harness (With Switch Key)	No	No	6	Main wiring Harness	EUT1 (Control Terminal)/Electric Steering Wheel /GNSS Receiver Wiring Harness
GNSS Receiver Wiring Harness	No	No	4.5	GNSS Receiver Wiring Harness	EUT2 (GNSS Receiver)
Spare Main Wiring Harness	No	No	2	EUT1 (Control Terminal)	Angle Sensor Wiring Harness/Camera Wiring Harness
Angle Sensor Wiring Harness	No	No	3	Spare Main Wiring Harness	Angle Sensor
Camera Wiring Harness	No	No	3	Spare Main Wiring Harness	Camera #2
Radio Antenna Coaxial Harness	No	No	4.5	EUT1 (Control Terminal)	Radio Antenna

3.5 Block Diagram of Test Setup

Radiated Spurious Emissions Below 1GHz:



Radiated Spurious Emissions Above 1GHz:



3.6 Test Facility

The Test site used by Bay Area Compliance Laboratories Corp. (Dongguan) to collect test data is located on the No.12, Pulong East 1st Road, Tangxia Town, Dongguan, Guangdong, China.

The lab has been recognized as the FCC accredited lab under the KDB 974614 D01 and is listed in the FCC Public Access Link (PAL) database, FCC Registration No.: 829273, the FCC Designation No.: CN5044.

The lab has been recognized by Innovation, Science and Economic Development Canada to test to Canadian radio equipment requirements, the CAB identifier: CN0022.

3.7 Measurement Uncertainty

Otherwise required by the applicant or Product Regulations, Decision Rule in this report did not consider the uncertainty. The extended uncertainty given in this report is obtained by combining the standard uncertainty times the coverage factor K with the 95% confidence interval.

Parameter	Measurement Uncertainty
Occupied Channel Bandwidth	±5 %
RF output power, conducted	±0.61dB
Power Spectral Density, conducted	±0.61 dB
Unwanted Emissions, radiated	9kHz~30MHz: 3.3dB, 30MHz~200MHz: 4.55 dB,200MHz~1GHz: 5.92 dB,1GHz~6GHz: 4.98 dB, 6GHz~18GHz: 5.89 dB, 18GHz~26.5GHz:5.47 dB, 26.5GHz~40GHz:5.63 dB
Unwanted Emissions, conducted	±2.47 dB
Temperature	±1℃
Humidity	±5%
DC and low frequency voltages	±0.4%
Duty Cycle	1%
AC Power Lines Conducted Emission	3.11 dB (150 kHz to 30 MHz)

4. REQUIREMENTS AND TEST PROCEDURES

4.1 AC Line Conducted Emissions

4.1.1 Applicable Standard

FCC§15.207(a).

(a) Except as shown in paragraphs (b) and (c) of this section, for an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies, within the band 150 kHz to 30 MHz, shall not exceed the limits in the following table, as measured using a 50 µH/50 ohms line impedance stabilization network (LISN). Compliance with the provisions of this paragraph shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminal. The lower limit applies at the boundary between the frequency ranges.

	Conducted limit (dBµV)	
Frequency of emission (MHz)	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

*Decreases with the logarithm of the frequency.

(b) The limit shown in paragraph (a) of this section shall not apply to carrier current systems operating as intentional radiators on frequencies below 30 MHz. In lieu thereof, these carrier current systems shall be subject to the following standards:

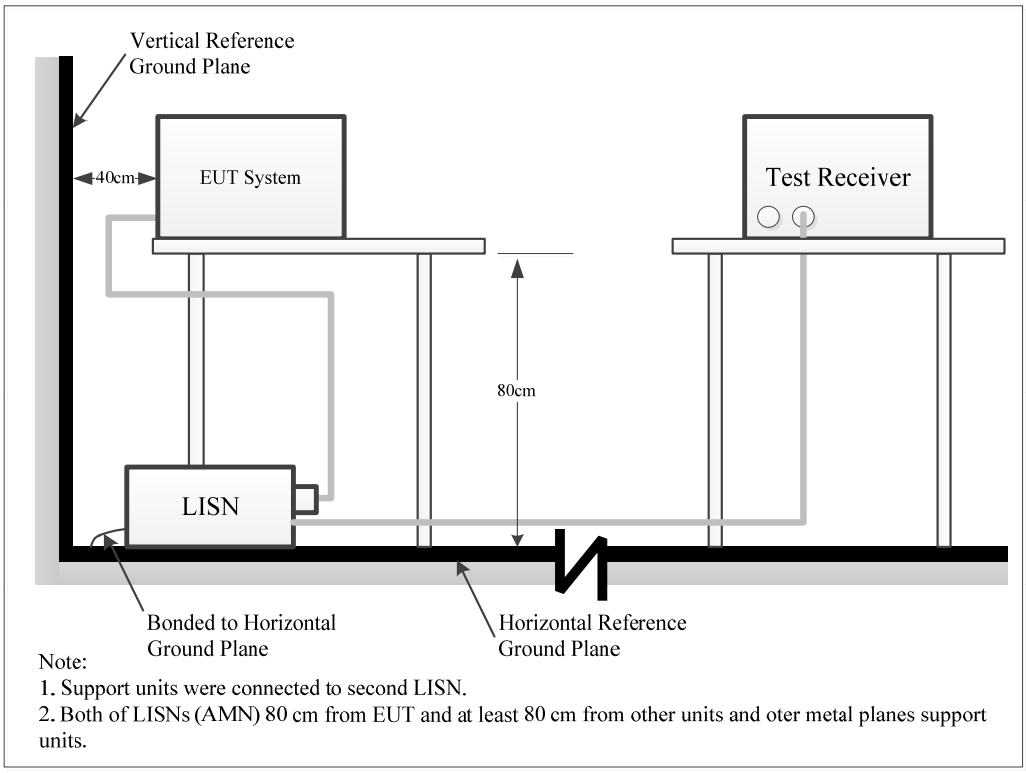
(1) For carrier current system containing their fundamental emission within the frequency band 535-1705 kHz and intended to be received using a standard AM broadcast receiver: no limit on conducted emissions.

(2) For all other carrier current systems: 1000 µV within the frequency band 535-1705 kHz, as measured using a 50 µH/50 ohms LISN.

(3) Carrier current systems operating below 30 MHz are also subject to the radiated emission limits in §15.205, §15.209, §15.221, §15.223, or §15.227, as appropriate.

(c) Measurements to demonstrate compliance with the conducted limits are not required for devices which only employ battery power for operation and which do not operate from the AC power lines or contain provisions for operation while connected to the AC power lines. Devices that include, or make provisions for, the use of battery chargers which permit operating while charging, AC adapters or battery eliminators or that connect to the AC power lines indirectly, obtaining their power through another device which is connected to the AC power lines, shall be tested to demonstrate compliance with the conducted limits.

4.1.2 EUT Setup



The setup of EUT is according with per ANSI C63.10-2020 measurement procedure. The specification used was with the FCC Part 15.207 limits.

The spacing between the peripherals was 10cm.

4.1.3 EMI Test Receiver Setup

The EMI test receiver was set to investigate the spectrum from 150 kHz to 30MHz.

During the conducted emission test, the EMI test receiver was set with the following configurations:

Frequency Range	IF B/W
150 kHz – 30 MHz	9 kHz

4.1.4 Test Procedure

The frequency and amplitude of the six highest ac power-line conducted emissions relative to the limit, measured over all the current-carrying conductors of the EUT power cords, and the operating frequency or frequency to which the EUT is tuned (if appropriate), should be reported, unless such emissions are more than 20 dB below the limit. AC power-line conducted emissions measurements are to be separately carried out only on each of the phase ("hot") line(s) and (if used) on the neutral line(s), but not on the ground [protective earth] line(s). If less than six emission frequencies are within 20 dB of the limit, then the noise level of the measuring instrument at representative frequencies should be reported. The specific conductor of the power-line cord for each of the reported emissions should be identified. Measure the six highest emissions with respect to the limit on each current-carrying conductor of each power cord associated with the EUT (but not the power cords of associated or peripheral equipment that are part of the test configuration). Then, report the six highest emissions with respect to the limit from among all the measurements identifying the frequency and specific current-carrying conductor identified with the emission. The six highest emissions should be reported for each of the current-carrying conductors, or the six highest emissions may be reported over all the current-carrying conductors.

4.1.5 Corrected Amplitude & Margin Calculation

The basic equation is as follows:

Result = Reading + Factor
Factor=attenuation caused by cable loss + voltage division factor of AMN

The "**Margin**" column of the following data tables indicates the degree of compliance within the applicable limit. The equation for margin calculation is as follows:

Margin = Limit – Result

4.1.6 Test Result

Please refer to section 5.1.

4.2 Radiation Spurious Emissions

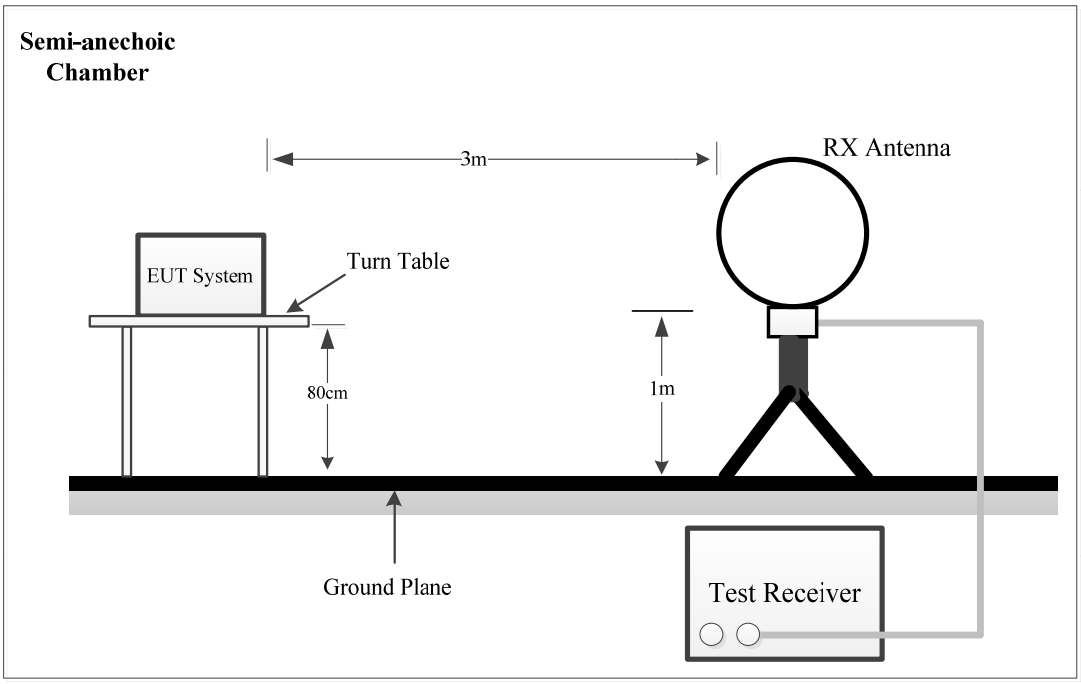
4.2.1 Applicable Standard

FCC §15.247 (d);

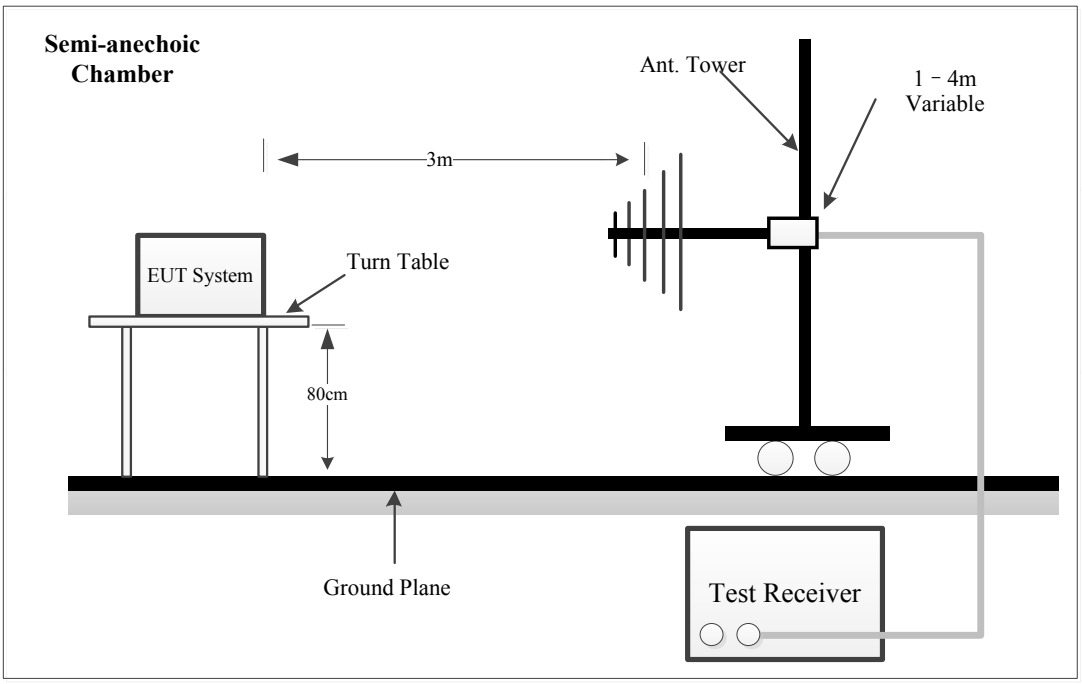
In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in§15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

4.2.2 EUT Setup

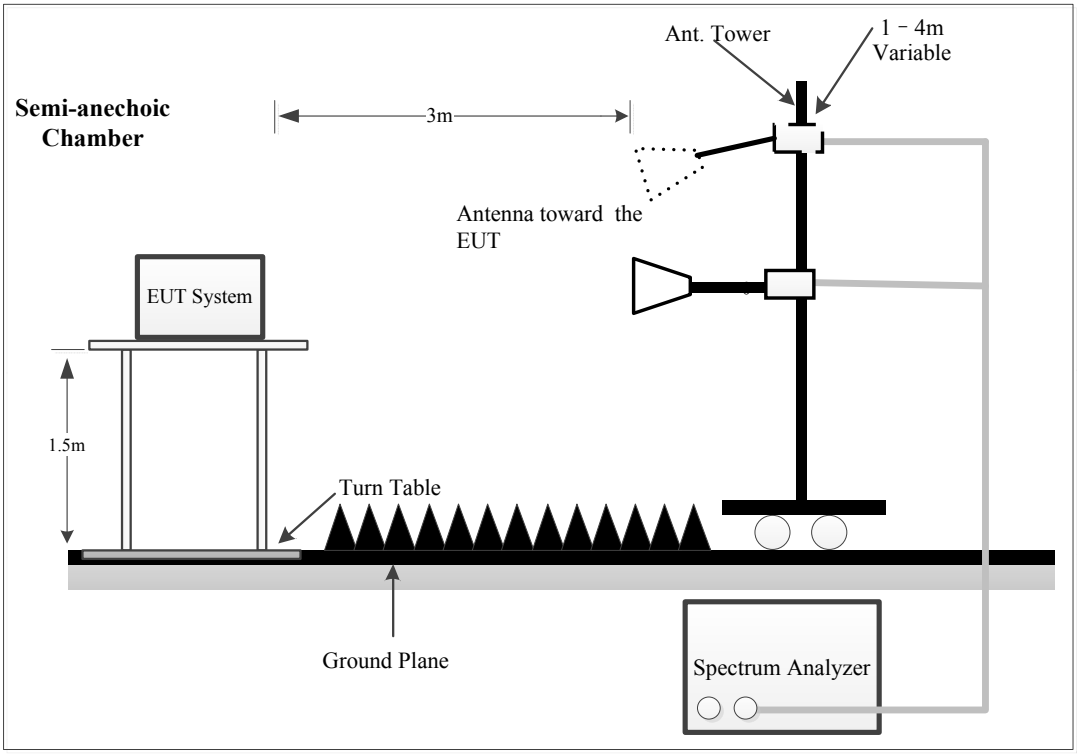
9kHz~30MHz:



30MHz~1GHz:



Above 1GHz:



The radiated emissions were performed in the 3 meters distance, using the setup accordance with the ANSI C63.10-2020. The specification used was the FCC 15.209, and FCC 15.247 limits.

The external I/O cables were draped along the test table and formed a bundle 30 to 40cm long in the middle.

For 9kHz-30MHz test, the lowest height of the magnetic antenna shall be 1 m above the ground and three antenna orientations (parallel, perpendicular, and ground-parallel) shall be measured.

4.2.3 EMI Test Receiver & Spectrum Analyzer Setup

The system was investigated from 9 kHz to 25 GHz.

During the radiated emission test, the EMI test receiver & Spectrum Analyzer Setup were set with the following configurations:

9kHz-1000MHz:

Frequency Range	Measurement	RBW	Video B/W	IF B/W	Detector
9 kHz – 150 kHz	QP/AV	300Hz	1 kHz	200 Hz	QP/AV
150 kHz – 30 MHz	QP/AV	10 kHz	30 kHz	9 kHz	QP/AV
30MHz – 1000 MHz	PK	100 kHz	300 kHz	/	PK
	QP	/	/	120kHz	QP

1GHz- 25GHz:
Pre-scan:

Frequency Range	Measurement	RBW	Video B/W	Detector
Above 1 GHz	Peak	1MHz	3 MHz	PK
	AV	1MHz	5kHz	PK

Final measurement for emission identified during the pre-scan:

Measurement	Detector	Duty cycle	RBW	Video B/W
PK	PK	Any	1MHz	3 MHz
Ave.	PK	>98%	1MHz	10 Hz
		<98%	1MHz	≥1/T

Note: T is minimum transmission duration

4.2.4 Test Procedure

Maximizing procedure was performed on the highest emissions to ensure that the EUT complied with all installation combinations.

Data was recorded in Quasi-peak detection mode for frequency range of 9 kHz -1 GHz, except 9-90 kHz, 110-490 kHz, employing an average detector, peak and Average detection modes for frequencies above 1 GHz.

If the maximized peak measured value is under the QP/Average limit by more than 6dB, then it is unnecessary to perform an QP/Average measurement.

4.2.5 Corrected Result& Margin Calculation

The basic equation is as follows:

Result = Reading + Factor
Factor= Antenna Factor + Cable Loss- Amplifier Gain

The "**Margin**" column of the following data tables indicates the degree of compliance within the applicable limit. The equation for margin calculation is as follows:

Margin = Limit – Result

4.2.6 Test Result

Please refer to section 5.2.

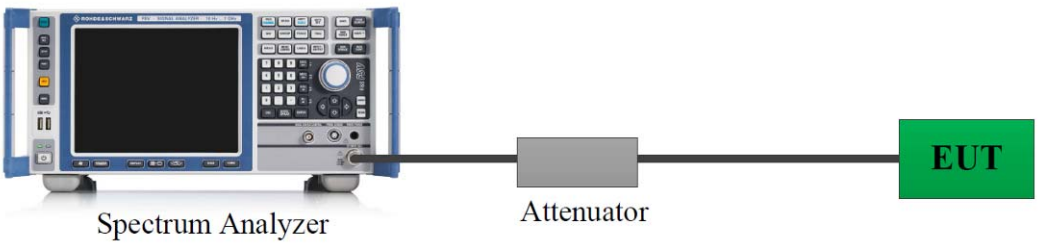
4.3 Minimum 6 dB Emission Bandwidth

4.3.1 Applicable Standard

FCC §15.247 (a)(2)

Systems using digital modulation techniques may operate in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands. The minimum 6 dB bandwidth shall be at least 500 kHz.

4.3.2 EUT Setup



A short RF cable with low cable loss connected to the EUT antenna port, which was provided by manufacturer. The insert loss of this RF cable/attenuator was offset into the setting of test equipment.

4.3.3 Test Procedure

According to ANSI C63.10-2020 Section 11.8

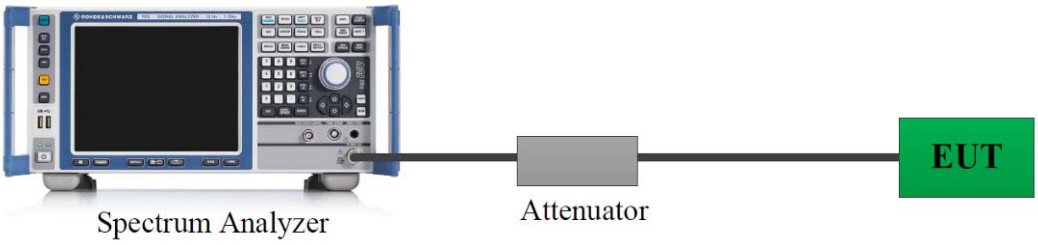
a) Set RBW = shall be in the range of 1% to 5% of the OBW but not less than 100 kHz.
b) Set the VBW ≥ [3 × RBW].
c) Detector = Peak.
d) Trace mode = max hold.
e) Sweep = No faster than coupled (auto) time.
f) Allow the trace to stabilize.
g) Measure the maximum width of the emission by placing two markers, one at the lowest frequency and the other at the highest frequency of the envelope of the spectral display, such that each marker is at or slightly below the "−6 dB down amplitude". If a marker is below this "−6 dB down amplitude" value, then it shall be as close as possible to this value.

4.3.4 Test Result

Please refer to section 5.3.

4.4 99% Occupied Bandwidth

4.4.1 EUT Setup



A short RF cable with low cable loss connected to the EUT antenna port, which was provided by manufacturer. The insert loss of this RF cable/attenuator was offset into the setting of test equipment.

4.4.2 Test Procedure

According to ANSI C63.10-2020 Section 6.9.3

The occupied bandwidth is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers are each equal to 0.5% of the total mean power of the given emission. The following procedure shall be used for measuring 99% power bandwidth:

a) The instrument center frequency is set to the nominal EUT channel center frequency. The frequency span for the spectrum analyzer shall be between 1.5 times and 5.0 times the OBW.

b) The nominal IF filter bandwidth (3 dB RBW) shall be in the range of 1% to 5% of the OBW, and VBW shall be approximately three times the RBW, unless otherwise specified by the applicable requirement.

c) Set the reference level of the instrument as required, keeping the signal from exceeding the maximum input mixer level for linear operation. In general, the peak of the spectral envelope shall be more than [10 log (OBW/RBW)] below the reference level. Specific guidance is given in 4.1.6.2.

d) Step a) through step c) might require iteration to adjust within the specified range.

e) Video averaging is not permitted. Where practical, a sample detection and single sweep mode shall be used. Otherwise, peak detection and max hold mode (until the trace stabilizes) shall be used.

f) Use the 99% power bandwidth function of the instrument (if available) and report the measured bandwidth.

g) If the instrument does not have a 99% power bandwidth function, then the trace data points are recovered and directly summed in linear power terms. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5% of the total is reached; that frequency is recorded as the lower frequency. The process is repeated until 99.5% of the total is reached; that frequency is recorded as the upper frequency. The 99% power bandwidth is the difference between these two frequencies.

h) The occupied bandwidth shall be reported by providing plot(s) of the measuring instrument display; the plot axes and the scale units per division shall be clearly labeled. Tabular data may be reported in addition to the plot(s).

4.4.3 Test Result

Please refer to section 5.4.

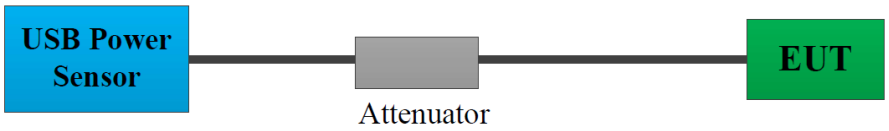
4.5 Maximum Conducted Output Power

4.5.1 Applicable Standard

FCC §15.247 (b)(3)

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, compliance with the one Watt limit can be based on a measurement of the maximum conducted output power. Maximum Conducted Output Power is defined as the total transmit power delivered to all antennas and antenna elements averaged across all symbols in the signaling alphabet when the transmitter is operating at its maximum power control level. Power must be summed across all antennas and antenna elements. The average must not include any time intervals during which the transmitter is off or is transmitting at a reduced power level. If multiple modes of operation are possible (e.g., alternative modulation methods), the maximum conducted output power is the highest total transmit power occurring in any mode.

4.5.2 EUT Setup



A short RF cable with low cable loss connected to the EUT antenna port, which was provided by manufacturer. The insert loss of this RF cable/attenuator was offset into the setting of test equipment.

4.5.3 Test Procedure

According to ANSI C63.10-2020 Section 11.9.1.2

The maximum peak conducted output power may be measured using a broadband peak RF power meter. The power meter shall have a video bandwidth that is greater than or equal to the DTS bandwidth and shall use a fast-responding diode detector.

a) Set the EUT in transmitting mode.
b) Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to test equipment.
c) Add a correction factor to the display.
d) Set the power meter to test peak output power, record the result.

According to ANSI C63.10-2020 Section 11.9.2.3.2

Method AVGPM-G is a measurement using a gated RF average power meter.

Alternatively, measurements may be performed using a wideband gated RF power meter provided that the gate parameters are adjusted such that the power is measured only when the EUT is transmitting at its maximum power control level. Because the measurement is made only during the ON time of the transmitter, no duty cycle correction factor is required.

4.5.4 Test Result

Please refer to section 5.5.

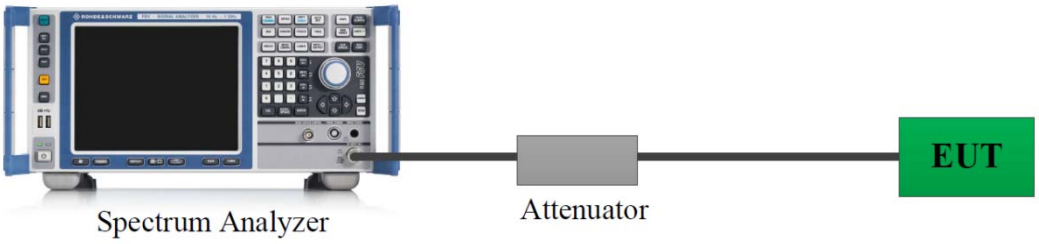
4.6 Maximum Power Spectral Density

4.6.1 Applicable Standard

FCC §15.247 (e)

For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission. This power spectral density shall be determined in accordance with the provisions of paragraph (b) of this section. The same method of determining the conducted output power shall be used to determine the power spectral density.

4.6.2 EUT Setup



A short RF cable with low cable loss connected to the EUT antenna port, which was provided by manufacturer. The insert loss of this RF cable/attenuator was offset into the setting of test equipment.

4.6.3 Test Procedure

According to ANSI C63.10-2020 Section 11.10.2

The following procedure shall be used if maximum peak conducted output power was used to determine compliance:

a) Set analyzer center frequency to DTS channel center frequency.
b) Set the span >1.5 times the DTS bandwidth.
c) Set RBW to: 3 kHz ≤ RBW ≤ 100 kHz.
d) Set VBW ≥ [3× RBW].
e) Detector = peak.
f) Sweep time = No faster than coupled (auto) time.
g) Trace mode = max hold.
h) Allow trace to fully stabilize.
i) Use the peak marker function to determine the maximum amplitude level within the RBW.
j) If measured value exceeds requirement, then reduce RBW (but no less than 3 kHz) and repeat.

4.6.4 Test Result

Please refer to section 5.6.

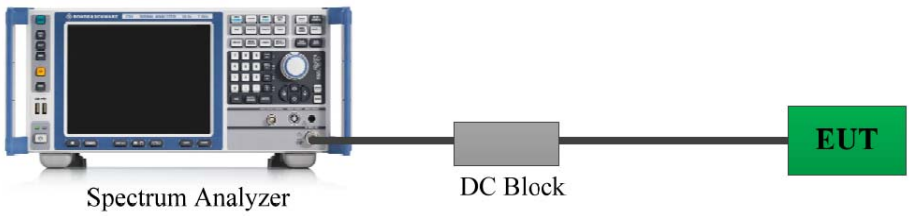
4.7 100 kHz Bandwidth of Frequency Band Edge

4.7.1 Applicable Standard

FCC §15.247 (d);

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in§15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

4.7.2 EUT Setup



A short RF cable with low cable loss connected to the EUT antenna port, which was provided by manufacturer. The insert loss of this RF cable/attenuator was offset into the setting of test equipment.

4.7.3 Test Procedure

According to ANSI C63.10-2020 Section 11.11

a) Set the center frequency and span to encompass frequency range to be measured.
b) Set the RBW = 100 kHz.
c) Set the VBW ≥ [3 × RBW].
d) Detector = peak.
e) Sweep time = No faster than coupled (auto) time.
f) Trace mode = max hold.
g) Allow trace to fully stabilize.
h) Use the peak marker function to determine the maximum amplitude level.

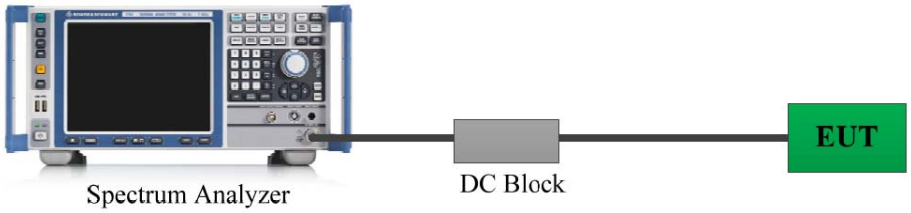
Ensure that the amplitude of all unwanted emissions outside of the authorized frequency band (excluding restricted frequency bands) is attenuated by at least the minimum requirements specified in 11.11. Report the three highest emissions relative to the limit.

4.7.4 Test Result

Please refer to section 5.7.

4.8 Duty Cycle

4.8.1 EUT Setup



A short RF cable with low cable loss connected to the EUT antenna port, which was provided by manufacturer. The insert loss of this RF cable/attenuator was offset into the setting of test equipment.

4.8.2 Test Procedure

According to ANSI C63.10-2020 Section 11.6

The zero-span mode on a spectrum analyzer or EMI receiver if the response time and spacing between bins on the sweep are sufficient to permit accurate measurements of the ON and OFF times of the transmitted signal:
1) Set the center frequency of the instrument to the center frequency of the transmission.
2) Set RBW ≥ OBW if possible; otherwise, set RBW to the largest available value.
3) Set VBW ≥ RBW. Set detector = peak or average.
4) The zero-span measurement method shall not be used unless both RBW and VBW are> 50/T and the number of sweep points across duration T exceeds 100. (For example, if VBW and/or RBW are limited to 3 MHz, then the zero-span method of measuring the duty cycle shall not be used if T ≤ 16.7 μs.)

4.8.3 Judgment

Report Only. Please refer to section 5.8.

4.9 Antenna Requirement

4.9.1 Applicable Standard

FCC §15.203

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited. This requirement does not apply to carrier current devices or to devices operated under the provisions of §§15.211, 15.213, 15.217, 15.219, 15.221, or§15.236. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with §15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this part are not exceeded.

4.9.2 Judgment

Compliant. Please refer to the Antenna Information detail in Section 1.3.

5. Test DATA AND RESULTS

5.1 AC Line Conducted Emissions

Not Applicable, the EUT is a vehicle-mounted device, not applicable for this test item.

5.2 Radiation Spurious Emissions

1)9kHz - 1GHz

Serial Number:	314Y-1	Test Date:	2025/4/24
Test Site:	Chamber10m	Test Mode:	Transmitting
Tester:	Willem Qiu	Test Result:	Pass

Environmental Conditions:					
Temperature: (℃)	25.3	Relative Humidity: (%)	51	ATM Pressure: (kPa)	100.3

Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
EMCO	Passive Loop Antenna	6512	9706-1206	2023/10/25	2026/10/24
Sunol Sciences	Hybrid Antenna	JB3	A060611-1	2023/9/6	2026/9/5
Narda	Coaxial Attenuator	779-6dB	04269	2023/9/6	2026/9/5
Unknown	Coaxial Cable	C-NJNJ-50	C-1000-01	2024/7/1	2025/6/30
Unknown	Coaxial Cable	C-NJNJ-50	C-0400-04	2024/7/1	2025/6/30
Unknown	Coaxial Cable	C-NJNJ-50	C-0530-01	2024/7/1	2025/6/30
Sonoma	Amplifier	310N	185914	2024/8/26	2025/8/25
R&S	EMI Test Receiver	ESCI	100224	2024/8/26	2025/8/25
Audix	Test Software	E3	191218 V9	N/A	N/A

** Statement of Traceability: Bay Area Compliance Laboratories Corp. (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).*

Test Data:

Please refer to the below table and plots.

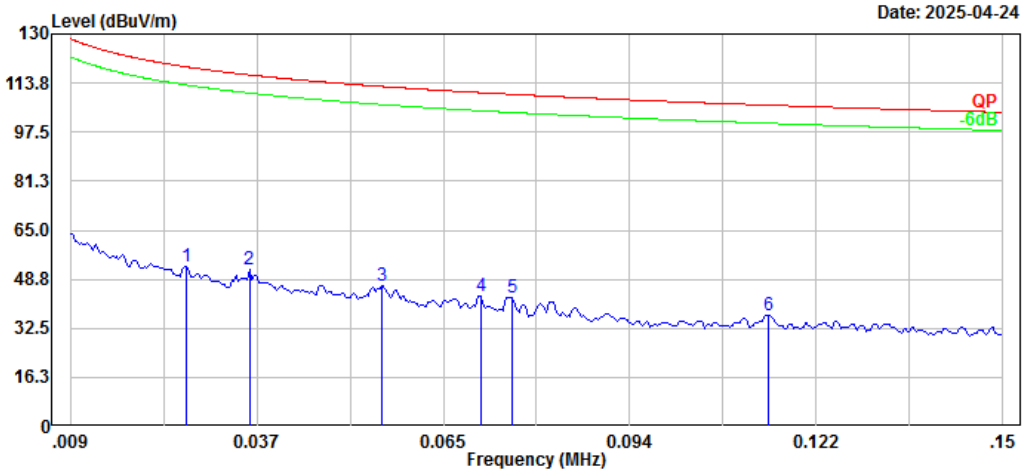
After pre-scan in the X, Y and Z axes of orientation, the worst case is referred to following plots.

Note: The maximum output power mode and channel: 802.11n ht40 mode middle channel was tested.

9kHz~30MHz

Three antenna orientations (parallel, perpendicular, and ground-parallel) were measured, the worst orientations were below:

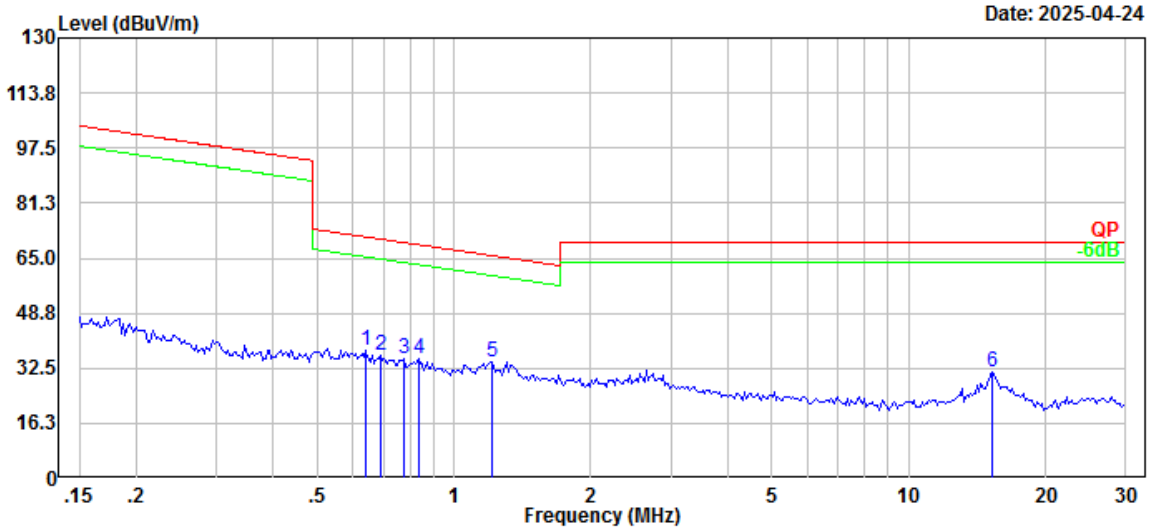
```
 Project No.: 2502S52446E-RF                    Serial No.: 314Y-1
Polarization: Parallel                              Tester: Willem Qiu
   Test Mode: Transmitting
        Note:
              RBW:300Hz VBW:1kHz
```



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Measurement
1	0.026	4.34	48.43	52.77	119.14	66.37	Peak
2	0.036	5.76	46.47	52.23	116.46	64.23	Peak
3	0.056	3.83	43.00	46.83	112.63	65.80	Peak
4	0.071	2.58	40.41	42.99	110.57	67.58	Peak
5	0.076	3.26	39.62	42.88	110.01	67.13	Peak
6	0.114	2.26	34.61	36.87	106.43	69.56	Peak

Project No.: 2502S52446E-RF
Polarization: Parallel
Test Mode: Transmitting
Note:
RBW:10kHz VBW:30kHz

Serial No.: 314Y-1
Tester: Willem Qiu

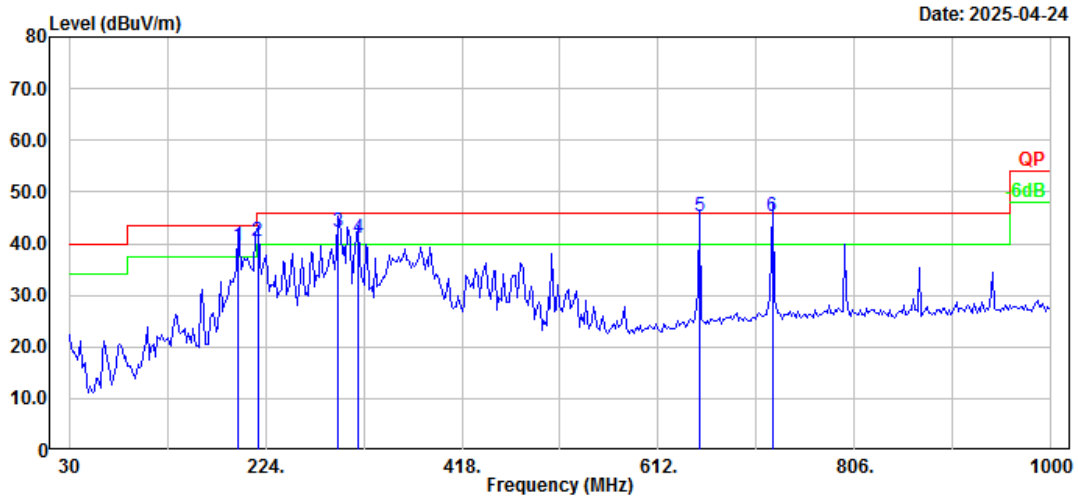


No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Measurement
1	0.641	15.92	22.06	37.98	71.42	33.44	Peak
2	0.690	14.67	21.57	36.24	70.77	34.53	Peak
3	0.775	14.41	20.78	35.19	69.73	34.54	Peak
4	0.835	15.26	19.86	35.12	69.07	33.95	Peak
5	1.210	18.64	15.63	34.27	65.78	31.51	Peak
6	15.226	27.07	4.45	31.52	69.54	38.02	Peak

30MHz-1GHz

Project No.: 2502S52446E-RF
Polarization: Horizontal
Test Mode: Transmitting
Note:
RBW:100kHz VBW:300kHz

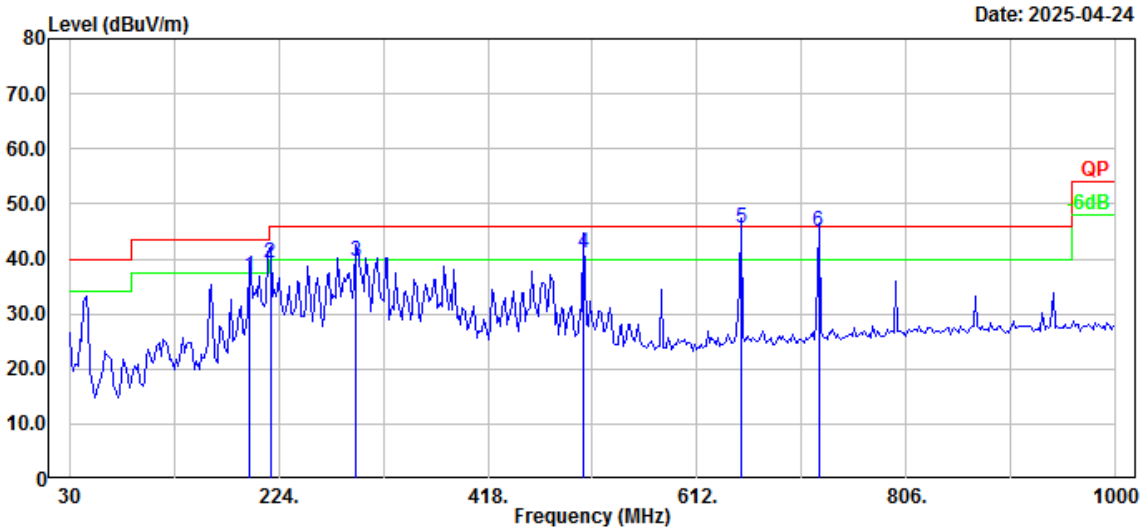
Serial No.: 314Y-1
Tester: Willem Qiu



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Measurement
1	196.84	51.30	-11.72	39.58	43.50	3.92	QP
2	216.24	53.00	-12.52	40.48	46.00	5.52	QP
3	295.78	51.71	-9.55	42.16	46.00	3.84	QP
4	315.18	50.10	-9.18	40.92	46.00	5.08	QP
5	652.74	47.00	-1.84	45.16	46.00	0.84	QP
6	724.52	46.21	-0.82	45.39	46.00	0.61	QP

Project No.: 2502S52446E-RF
Polarization: Vertical
Test Mode: Transmitting
Note:
RBW:100kHz VBW:300kHz

Serial No.: 314Y-1
Tester: Willem Qiu



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Measurement
1	196.84	48.60	-11.72	36.88	43.50	6.62	QP
2	216.24	51.80	-12.52	39.28	46.00	6.72	QP
3	295.78	49.21	-9.55	39.66	46.00	6.34	QP
4	507.24	45.30	-4.16	41.14	46.00	4.86	QP
5	652.74	47.30	-1.84	45.46	46.00	0.54	QP
6	724.52	45.81	-0.82	44.99	46.00	1.01	QP

2) 1-25GHz

Serial Number:	314Y-1	Test Date:	2025/4/18
Test Site:	Chamber B	Test Mode:	Transmitting
Tester:	Leo Xiao	Test Result:	Pass

Environmental Conditions:					
Temperature: (℃)	24.4	Relative Humidity: (%)	44	ATM Pressure: (kPa)	100.4

Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
ETS-Lindgren	Horn Antenna	3115	000 527 35	2023/9/7	2026/9/6
Ducommun Technologies	Horn Antenna	ARH-4223-02	1007726-02 1304	2023/2/22	2026/2/21
Xinhang Macrowave	Coaxial Cable	XH750A-N/J-SMA/J-10M	20231117004 #0001	2024/11/17	2025/11/16
Xinhang Macrowave	Coaxial Cable	XH360A-2.92/J-2.92/J-6M-A	20231208001 #0001	2024/12/9	2025/12/8
AH	Preamplifier	PAM-0118P	469	2025/4/11	2026/4/10
AH	Preamplifier	PAM-1840VH	191	2024/9/5	2025/9/4
R&S	Spectrum Analyzer	FSV40	101589	2024/9/5	2025/9/4
Audix	Test Software	E3	191218 V9	N/A	N/A
Decentest	Multiplex Switch Test Control Set & Filter Switch Unit	DT7220SCU & DT7220FCU	DC79902 & DC79905	2024/8/27	2025/8/26

** Statement of Traceability: Bay Area Compliance Laboratories Corp. (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).*

Test Data:

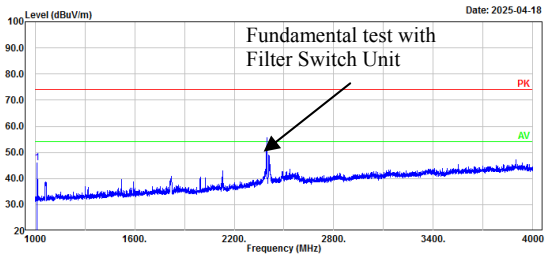
Please refer to the below table and plots.

After pre-scan in the X, Y and Z axes of orientation, the worst case is referred to following plots.

1-18GHz:

802.11b Chain0, Low Channel, Horizontal

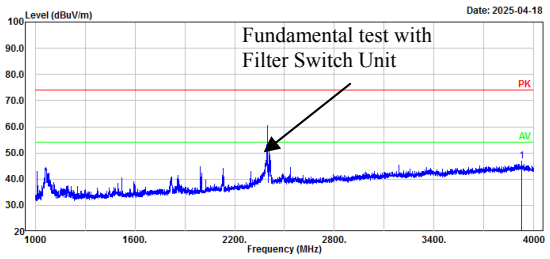
Project No.: 2502S52446E-RF
Polarization: Horizontal
Test Mode: Transmitting
Note: 802.11b low channel 2412MHz Chain0
Peak:RBW:1MHz,VBW:3MHz
Serial No.: 314Y-1
Tester: Leo Xiao



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	1013.20	60.48	-14.44	46.04	74.00	27.96	Peak

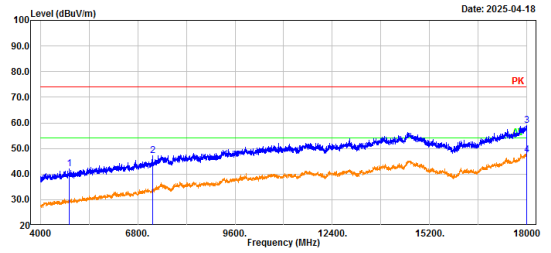
802.11b Chain0, Low Channel, Vertical

Project No.: 2502S52446E-RF
Polarization: Vertical
Test Mode: Transmitting
Note: 802.11b low channel 2412MHz Chain0
Peak:RBW:1MHz,VBW:3MHz
Serial No.: 314Y-1
Tester: Leo Xiao



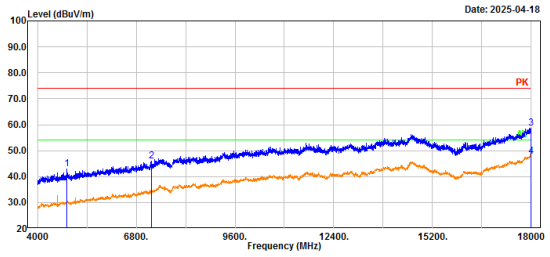
No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	3926.20	50.62	-3.76	46.86	74.00	27.14	Peak

Project No.: 2502S52446E-RF
Polarization: Horizontal
Test Mode: Transmitting
Note: 802.11b low channel 2412MHz Chain0
Peak:RBW:1MHz,VBW:3MHz Ave:RBW:1MHz,VBW:5kHz
Serial No.: 314Y-1
Tester: Leo Xiao



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	4824.00	50.65	-8.58	42.07	74.00	31.93	Peak
2	7236.00	50.77	-3.67	47.10	74.00	26.90	Peak
3	17991.60	47.74	11.35	59.09	74.00	14.91	Peak
4	17991.60	36.27	11.35	47.62	54.00	6.38	Average

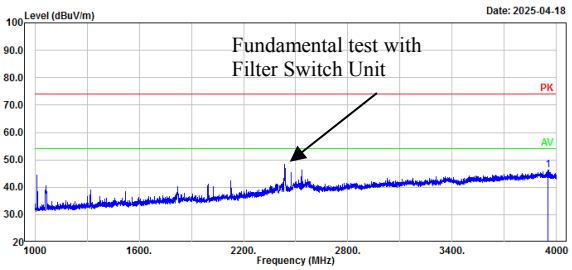
Project No.: 2502S52446E-RF
Polarization: Vertical
Test Mode: Transmitting
Note: 802.11b low channel 2412MHz Chain0
Peak:RBW:1MHz,VBW:3MHz Ave:RBW:1MHz,VBW:5kHz
Serial No.: 314Y-1
Tester: Leo Xiao



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	4824.00	51.40	-8.58	42.82	74.00	31.18	Peak
2	7236.00	49.54	-3.67	45.87	74.00	28.13	Peak
3	17994.40	47.34	11.37	58.71	74.00	15.29	Peak
4	17994.40	36.48	11.37	47.85	54.00	6.15	Average

802.11b Chain0, Middle Channel, Horizontal

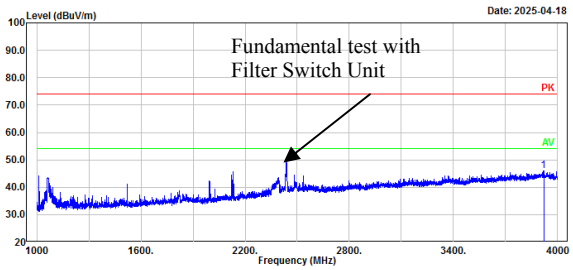
Project No.: 2502S52446E-RF Serial No.: 314Y-1
Polarization: Horizontal Tester: Leo Xiao
Test Mode: Transmitting
Note: 802.11b middle channel 2437MHz Chain0
Peak:RBW:1MHz,VBW:3MHz



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	3948.40	49.85	-3.62	46.23	74.00	27.77	Peak

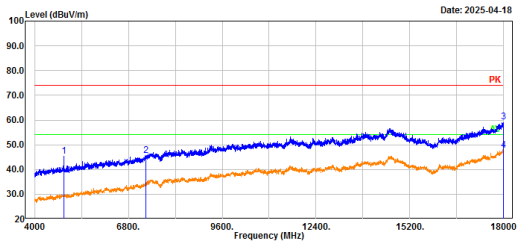
802.11b Chain0, Middle Channel, Vertical

Project No.: 2502S52446E-RF Serial No.: 314Y-1
Polarization: Vertical Tester: Leo Xiao
Test Mode: Transmitting
Note: 802.11b middle channel 2437MHz Chain0
Peak:RBW:1MHz,VBW:3MHz



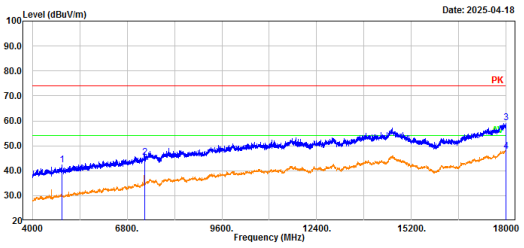
No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	3919.60	49.82	-3.74	46.08	74.00	27.92	Peak

Project No.: 2502S52446E-RF Serial No.: 314Y-1
Polarization: Horizontal Tester: Leo Xiao
Test Mode: Transmitting
Note: 802.11b middle channel 2437MHz Chain0
Peak:RBW:1MHz,VBW:3MHz Ave:RBW:1MHz,VBW:5kHz



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	4874.00	53.84	-8.50	45.34	74.00	28.66	Peak
2	7311.00	48.96	-3.27	45.69	74.00	28.31	Peak
3	17999.00	47.89	11.38	59.27	74.00	14.73	Peak
4	17999.00	36.41	11.38	47.79	54.00	6.21	Average

Project No.: 2502S52446E-RF Serial No.: 314Y-1
Polarization: Vertical Tester: Leo Xiao
Test Mode: Transmitting
Note: 802.11b middle channel 2437MHz Chain0
Peak:RBW:1MHz,VBW:3MHz Ave:RBW:1MHz,VBW:5kHz

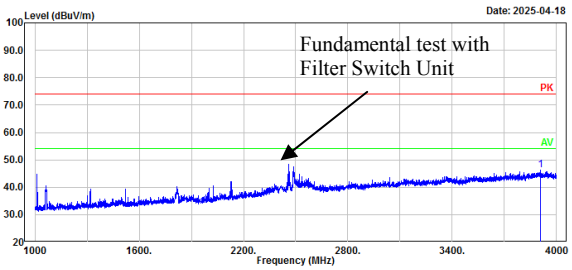


No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	4874.00	50.83	-8.50	42.33	74.00	31.67	Peak
2	7311.00	48.56	-3.27	45.29	74.00	28.71	Peak
3	17999.00	47.81	11.38	59.19	74.00	14.81	Peak
4	17999.00	36.44	11.38	47.82	54.00	6.18	Average

802.11b Chain0, High Channel, Horizontal

Project No.: 2502S52446E-RF
Polarization: Horizontal
Test Mode: Transmitting
Note: 802.11b high channel 2462MHz Chain0
Peak:RBW:1MHz,VBW:3MHz

Serial No.: 314Y-1
Tester: Leo Xiao

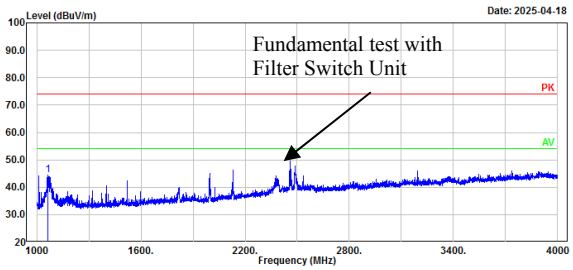


No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	3907.60	50.05	-3.67	46.38	74.00	27.62	Peak

802.11b Chain0, High Channel, Vertical

Project No.: 2502S52446E-RF
Polarization: Vertical
Test Mode: Transmitting
Note: 802.11b high channel 2462MHz Chain0
Peak:RBW:1MHz,VBW:3MHz

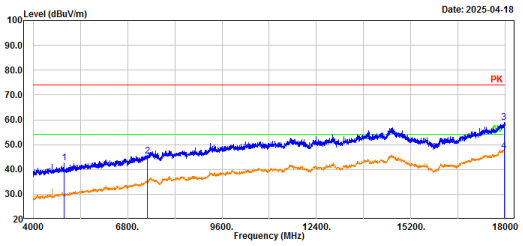
Serial No.: 314Y-1
Tester: Leo Xiao



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	1065.40	58.80	-14.27	44.53	74.00	29.47	Peak

Project No.: 2502S52446E-RF
Polarization: Horizontal
Test Mode: Transmitting
Note: 802.11b high channel 2462MHz Chain0
Peak:RBW:1MHz,VBW:3MHz Ave:RBW:1MHz,VBW:5kHz

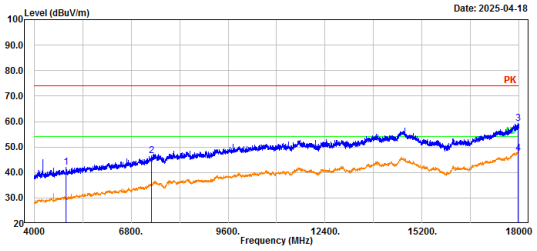
Serial No.: 314Y-1
Tester: Leo Xiao



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	4924.00	51.05	-8.47	42.58	74.00	31.42	Peak
2	7386.00	48.05	-2.71	45.34	74.00	28.66	Peak
3	17958.00	47.76	11.14	58.90	74.00	15.10	Peak
4	17958.00	36.45	11.14	47.59	54.00	6.41	Average

Project No.: 2502S52446E-RF
Polarization: Vertical
Test Mode: Transmitting
Note: 802.11b high channel 2462MHz Chain0
Peak:RBW:1MHz,VBW:3MHz Ave:RBW:1MHz,VBW:5kHz

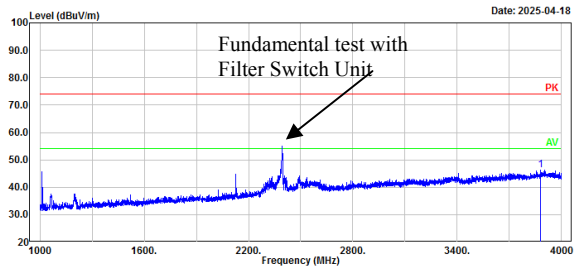
Serial No.: 314Y-1
Tester: Leo Xiao



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	4924.00	50.58	-8.47	42.11	74.00	31.89	Peak
2	7386.00	49.24	-2.71	46.53	74.00	27.47	Peak
3	17977.60	47.86	11.28	59.14	74.00	14.86	Peak
4	17977.60	36.29	11.28	47.57	54.00	6.43	Average

802.11g Chain0, Low Channel, Horizontal

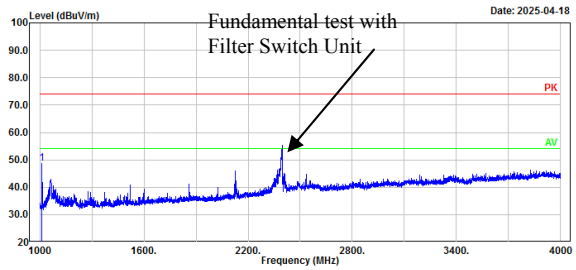
Project No.: 2502S52446E-RF
Polarization: Horizontal
Test Mode: Transmitting
Note: 802.11g low channel 2412MHz Chain0
Peak:RBW:1MHz,VBW:3MHz
Serial No.: 314Y-1
Tester: Leo Xiao



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	3878.80	50.17	-3.93	46.24	74.00	27.76	Peak

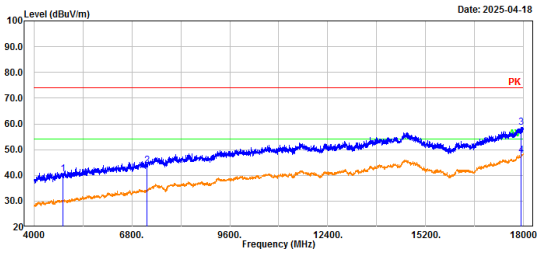
802.11g Chain0, Low Channel, Vertical

Project No.: 2502S52446E-RF
Polarization: Vertical
Test Mode: Transmitting
Note: 802.11g low channel 2412MHz Chain0
Peak:RBW:1MHz,VBW:3MHz
Serial No.: 314Y-1
Tester: Leo Xiao



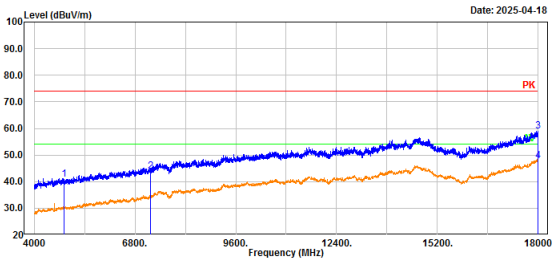
No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	1013.20	63.20	-14.44	48.76	74.00	25.24	Peak

Project No.: 2502S52446E-RF
Polarization: Horizontal
Test Mode: Transmitting
Note: 802.11g low channel 2412MHz Chain0
Peak:RBW:1MHz,VBW:3MHz Ave:RBW:1MHz,VBW:5kHz
Serial No.: 314Y-1
Tester: Leo Xiao



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	4824.00	49.00	-8.58	40.42	74.00	33.58	Peak
2	7236.00	47.52	-3.67	43.85	74.00	30.15	Peak
3	17932.80	47.81	10.96	58.77	74.00	15.23	Peak
4	17932.80	36.74	10.96	47.70	54.00	6.30	Average

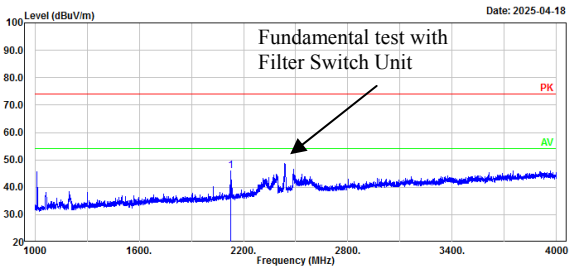
Project No.: 2502S52446E-RF
Polarization: Vertical
Test Mode: Transmitting
Note: 802.11g low channel 2412MHz Chain0
Peak:RBW:1MHz,VBW:3MHz Ave:RBW:1MHz,VBW:5kHz
Serial No.: 314Y-1
Tester: Leo Xiao



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	4824.00	49.40	-8.58	40.82	74.00	33.18	Peak
2	7236.00	47.55	-3.67	43.88	74.00	30.12	Peak
3	17991.60	47.60	11.35	58.95	74.00	15.05	Peak
4	17991.60	36.38	11.35	47.73	54.00	6.27	Average

802.11g Chain0, Middle Channel, Horizontal

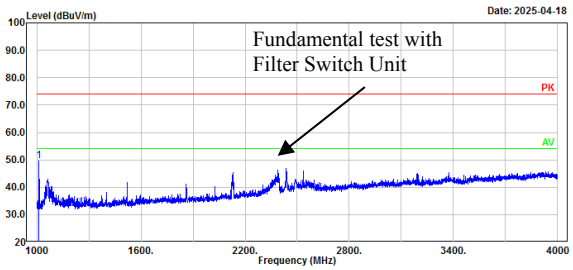
Project No.: 2502S52446E-RF Serial No.: 314Y-1
Polarization: Horizontal Tester: Leo Xiao
Test Mode: Transmitting
Note: 802.11g middle channel 2437MHz Chain0
Peak:RBW:1MHz,VBW:3MHz



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	2127.40	56.60	-10.53	46.07	74.00	27.93	Peak

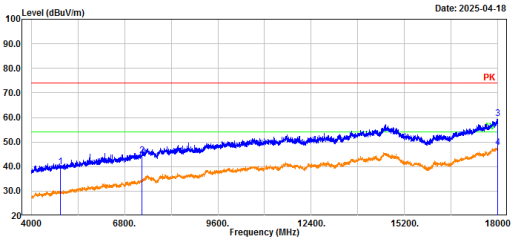
802.11g Chain0, Middle Channel, Vertical

Project No.: 2502S52446E-RF Serial No.: 314Y-1
Polarization: Vertical Tester: Leo Xiao
Test Mode: Transmitting
Note: 802.11g middle channel 2437MHz Chain0
Peak:RBW:1MHz,VBW:3MHz



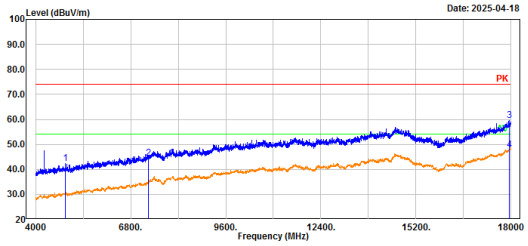
No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	1013.20	64.15	-14.44	49.71	74.00	24.29	Peak

Project No.: 2502S52446E-RF Serial No.: 314Y-1
Polarization: Horizontal Tester: Leo Xiao
Test Mode: Transmitting
Note: 802.11g middle channel 2437MHz Chain0
Peak:RBW:1MHz,VBW:3MHz Ave:RBW:1MHz,VBW:5kHz



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	4874.00	48.30	-8.50	39.80	74.00	34.20	Peak
2	7311.00	47.62	-3.27	44.35	74.00	29.65	Peak
3	17999.00	48.02	11.38	59.40	74.00	14.60	Peak
4	17999.00	36.48	11.38	47.86	54.00	6.14	Average

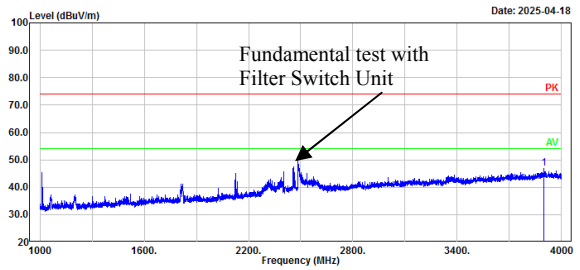
Project No.: 2502S52446E-RF Serial No.: 314Y-1
Polarization: Vertical Tester: Leo Xiao
Test Mode: Transmitting
Note: 802.11g middle channel 2437MHz Chain0
Peak:RBW:1MHz,VBW:3MHz Ave:RBW:1MHz,VBW:5kHz



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	4874.00	50.87	-8.50	42.37	74.00	31.63	Peak
2	7311.00	47.73	-3.27	44.46	74.00	29.54	Peak
3	17944.00	48.63	11.04	59.67	74.00	14.33	Peak
4	17944.00	36.63	11.04	47.67	54.00	6.33	Average

802.11g Chain0, High Channel, Horizontal

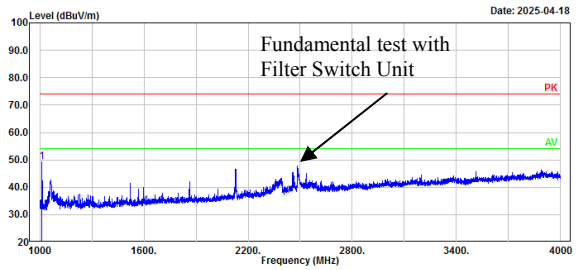
Project No.: 2502S52446E-RF
Polarization: Horizontal
Test Mode: Transmitting
Note: 802.11g high channel 2462MHz Chain0
Peak:RBW:1MHz,VBW:3MHz
Serial No.: 314Y-1
Tester: Leo Xiao



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	3900.40	50.36	-3.61	46.75	74.00	27.25	Peak

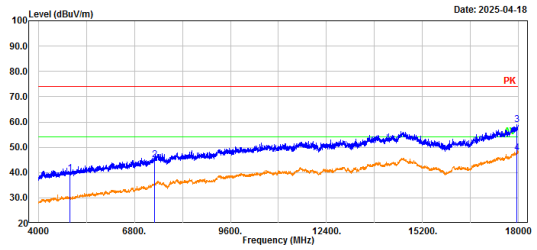
802.11g Chain0, High Channel, Vertical

Project No.: 2502S52446E-RF
Polarization: Vertical
Test Mode: Transmitting
Note: 802.11g high channel 2462MHz Chain0
Peak:RBW:1MHz,VBW:3MHz
Serial No.: 314Y-1
Tester: Leo Xiao



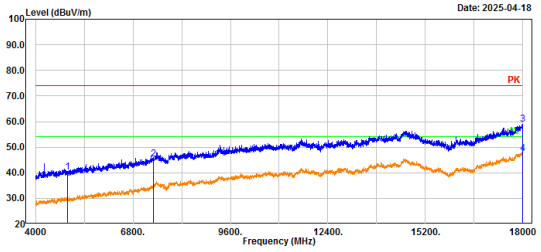
No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	1013.20	63.64	-14.44	49.20	74.00	24.80	Peak

Project No.: 2502S52446E-RF
Polarization: Horizontal
Test Mode: Transmitting
Note: 802.11g high channel 2462MHz Chain0
Peak:RBW:1MHz,VBW:3MHz Ave:RBW:1MHz,VBW:5kHz
Serial No.: 314Y-1
Tester: Leo Xiao



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	4924.00	47.95	-8.47	39.48	74.00	34.52	Peak
2	7386.00	47.83	-2.71	45.12	74.00	28.88	Peak
3	17944.00	48.05	11.04	59.09	74.00	14.91	Peak
4	17944.00	36.59	11.04	47.63	54.00	6.37	Average

Project No.: 2502S52446E-RF
Polarization: Vertical
Test Mode: Transmitting
Note: 802.11g high channel 2462MHz Chain0
Peak:RBW:1MHz,VBW:3MHz Ave:RBW:1MHz,VBW:5kHz
Serial No.: 314Y-1
Tester: Leo Xiao

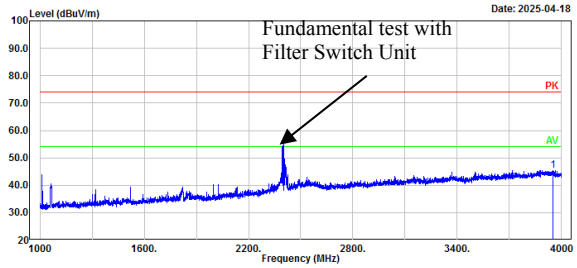


No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	4924.00	48.64	-8.47	40.17	74.00	33.83	Peak
2	7386.00	47.99	-2.71	45.28	74.00	28.72	Peak
3	17997.20	47.44	11.38	58.82	74.00	15.18	Peak
4	17997.20	36.20	11.38	47.58	54.00	6.42	Average

802.11b Chain1, Low Channel, Horizontal

Project No.: 2502S52446E-RF
Polarization: Horizontal
Test Mode: Transmitting
Note: 802.11b low channel 2412MHz Chain1
Peak:RBW:1MHz,VBW:3MHz

Serial No.: 314Y-1
Tester: Leo Xiao

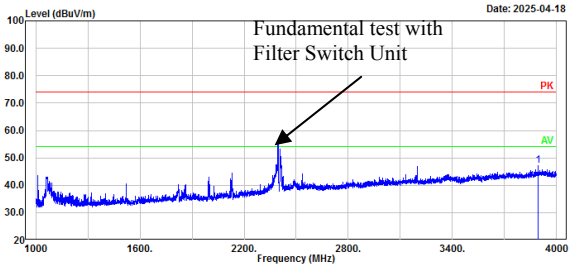


No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	3948.40	49.06	-3.62	45.44	74.00	28.56	Peak

802.11b Chain1, Low Channel, Vertical

Project No.: 2502S52446E-RF
Polarization: Vertical
Test Mode: Transmitting
Note: 802.11b low channel 2412MHz Chain1
Peak:RBW:1MHz,VBW:3MHz

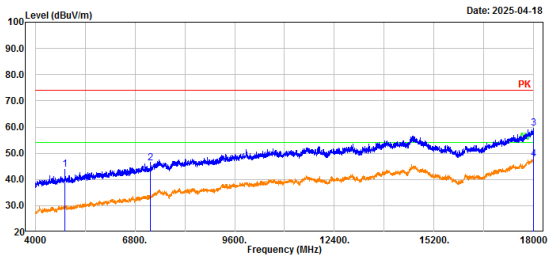
Serial No.: 314Y-1
Tester: Leo Xiao



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	3894.40	50.79	-3.65	47.14	74.00	26.86	Peak

Project No.: 2502S52446E-RF
Polarization: Horizontal
Test Mode: Transmitting
Note: 802.11b low channel 2412MHz Chain1
Peak:RBW:1MHz,VBW:3MHz Ave:RBW:1MHz,VBW:5kHz

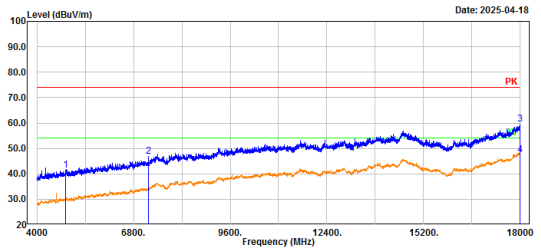
Serial No.: 314Y-1
Tester: Leo Xiao



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	4824.00	52.36	-8.58	43.78	74.00	30.22	Peak
2	7236.00	50.05	-3.67	46.38	74.00	27.62	Peak
3	17983.20	48.22	11.32	59.54	74.00	14.46	Peak
4	17983.20	36.33	11.32	47.65	54.00	6.35	Average

Project No.: 2502S52446E-RF
Polarization: Vertical
Test Mode: Transmitting
Note: 802.11b low channel 2412MHz Chain1
Peak:RBW:1MHz,VBW:3MHz Ave:RBW:1MHz,VBW:5kHz

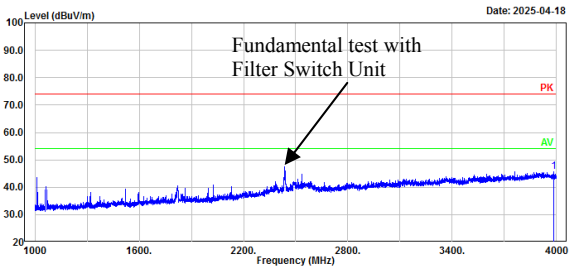
Serial No.: 314Y-1
Tester: Leo Xiao



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	4824.00	50.16	-8.58	41.58	74.00	32.42	Peak
2	7236.00	50.56	-3.67	46.89	74.00	27.11	Peak
3	17983.20	48.26	11.32	59.58	74.00	14.42	Peak
4	17983.20	36.28	11.32	47.60	54.00	6.40	Average

802.11b Chain1, Middle Channel, Horizontal

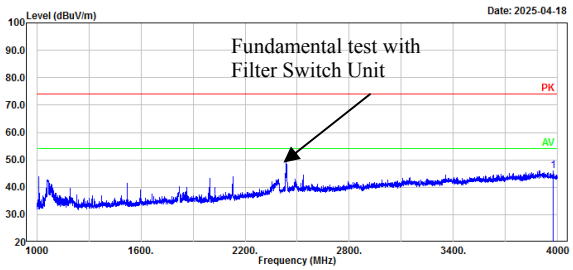
Project No.: 2502S52446E-RF Serial No.: 314Y-1
Polarization: Horizontal Tester: Leo Xiao
Test Mode: Transmitting
Note: 802.11b middle channel 2437MHz Chain1
Peak:RBW:1MHz,VBW:3MHz



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	3985.00	49.39	-3.79	45.60	74.00	28.40	Peak

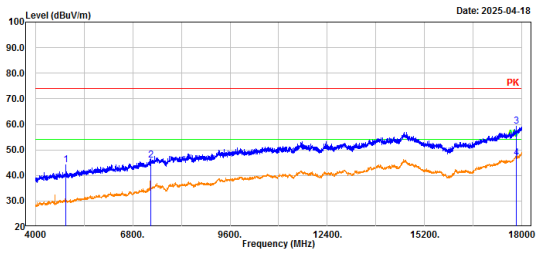
802.11b Chain1, Middle Channel, Vertical

Project No.: 2502S52446E-RF Serial No.: 314Y-1
Polarization: Vertical Tester: Leo Xiao
Test Mode: Transmitting
Note: 802.11b middle channel 2437MHz Chain1
Peak:RBW:1MHz,VBW:3MHz



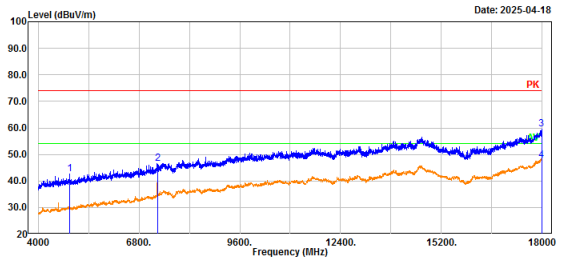
No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	3974.20	49.80	-3.75	46.05	74.00	27.95	Peak

Project No.: 2502S52446E-RF Serial No.: 314Y-1
Polarization: Horizontal Tester: Leo Xiao
Test Mode: Transmitting
Note: 802.11b middle channel 2437MHz Chain1
Peak:RBW:1MHz,VBW:3MHz Ave:RBW:1MHz,VBW:5kHz



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	4874.00	52.79	-8.50	44.29	74.00	29.71	Peak
2	7311.00	49.20	-3.27	45.93	74.00	28.07	Peak
3	17843.20	48.93	10.41	59.34	74.00	14.66	Peak
4	17843.20	36.58	10.41	46.99	54.00	7.01	Average

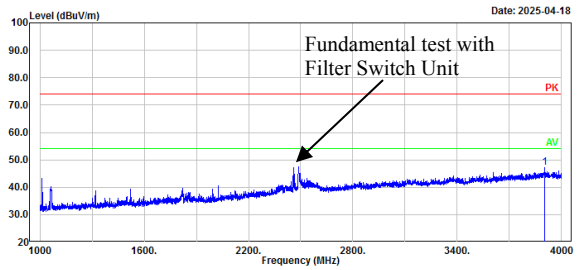
Project No.: 2502S52446E-RF Serial No.: 314Y-1
Polarization: Vertical Tester: Leo Xiao
Test Mode: Transmitting
Note: 802.11b middle channel 2437MHz Chain1
Peak:RBW:1MHz,VBW:3MHz Ave:RBW:1MHz,VBW:5kHz



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	4874.00	51.09	-8.50	42.59	74.00	31.41	Peak
2	7311.00	49.79	-3.27	46.52	74.00	27.48	Peak
3	17980.40	48.30	11.30	59.60	74.00	14.40	Peak
4	17980.40	36.44	11.30	47.74	54.00	6.26	Average

802.11b Chain1, High Channel, Horizontal

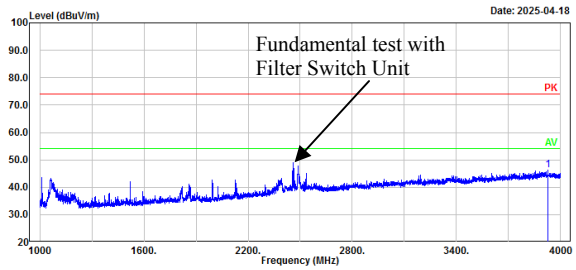
Project No.: 2502S52446E-RF
Polarization: Horizontal
Test Mode: Transmitting
Note: 802.11b high channel 2462MHz Chain1
Peak:RBW:1MHz,VBW:3MHz
Serial No.: 314Y-1
Tester: Leo Xiao



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	3903.40	50.69	-3.63	47.06	74.00	26.94	Peak

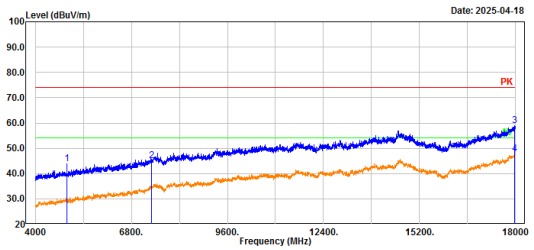
802.11b Chain1, High Channel, Vertical

Project No.: 2502S52446E-RF
Polarization: Vertical
Test Mode: Transmitting
Note: 802.11b high channel 2462MHz Chain1
Peak:RBW:1MHz,VBW:3MHz
Serial No.: 314Y-1
Tester: Leo Xiao



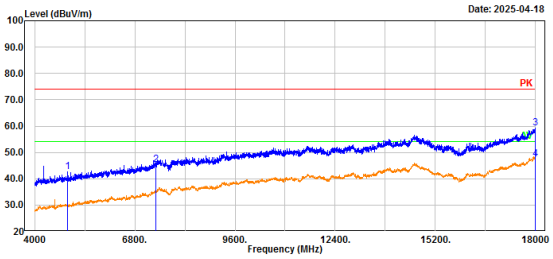
No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	3926.80	50.07	-3.76	46.31	74.00	27.69	Peak

Project No.: 2502S52446E-RF
Polarization: Horizontal
Test Mode: Transmitting
Note: 802.11b high channel 2462MHz Chain1
Peak:RBW:1MHz,VBW:3MHz Ave:RBW:1MHz,VBW:5kHz
Serial No.: 314Y-1
Tester: Leo Xiao



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	4924.00	52.43	-8.47	43.96	74.00	30.04	Peak
2	7386.00	47.67	-2.71	44.96	74.00	29.04	Peak
3	17974.80	47.58	11.25	58.83	74.00	15.17	Peak
4	17974.80	36.47	11.25	47.72	54.00	6.28	Average

Project No.: 2502S52446E-RF
Polarization: Vertical
Test Mode: Transmitting
Note: 802.11b high channel 2462MHz Chain1
Peak:RBW:1MHz,VBW:3MHz Ave:RBW:1MHz,VBW:5kHz
Serial No.: 314Y-1
Tester: Leo Xiao

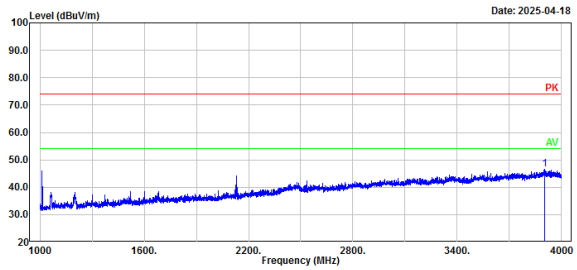


No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	4924.00	51.18	-8.47	42.71	74.00	31.29	Peak
2	7386.00	48.00	-2.71	45.29	74.00	28.71	Peak
3	17997.20	47.94	11.38	59.32	74.00	14.68	Peak
4	17997.20	36.23	11.38	47.61	54.00	6.39	Average

802.11g Chain1, Low Channel, Horizontal

Project No.: 2502S52446E-RF
Polarization: Horizontal
Test Mode: Transmitting
Note: 802.11g low channel 2412MHz Chain1
Peak:RBW:1MHz,VBW:3MHz

Serial No.: 314Y-1
Tester: Leo Xiao

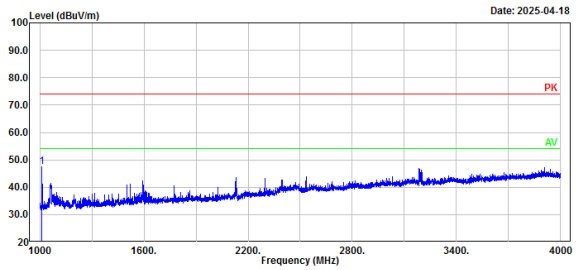


No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	3904.00	50.11	-3.64	46.47	74.00	27.53	Peak

802.11g Chain1, Low Channel, Vertical

Project No.: 2502S52446E-RF
Polarization: Vertical
Test Mode: Transmitting
Note: 802.11g low channel 2412MHz Chain1
Peak:RBW:1MHz,VBW:3MHz

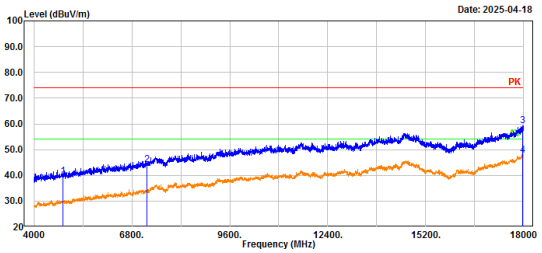
Serial No.: 314Y-1
Tester: Leo Xiao



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	1013.20	61.86	-14.44	47.42	74.00	26.58	Peak

Project No.: 2502S52446E-RF
Polarization: Horizontal
Test Mode: Transmitting
Note: 802.11g low channel 2412MHz Chain1
Peak:RBW:1MHz,VBW:3MHz Ave:RBW:1MHz,VBW:5kHz

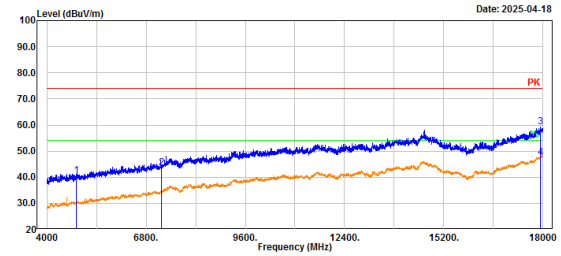
Serial No.: 314Y-1
Tester: Leo Xiao



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	4824.00	48.25	-8.58	39.67	74.00	34.33	Peak
2	7236.00	47.73	-3.67	44.06	74.00	29.94	Peak
3	17960.80	48.23	11.16	59.39	74.00	14.61	Peak
4	17960.80	36.58	11.16	47.74	54.00	6.26	Average

Project No.: 2502S52446E-RF
Polarization: Vertical
Test Mode: Transmitting
Note: 802.11g low channel 2412MHz Chain1
Peak:RBW:1MHz,VBW:3MHz Ave:RBW:1MHz,VBW:5kHz

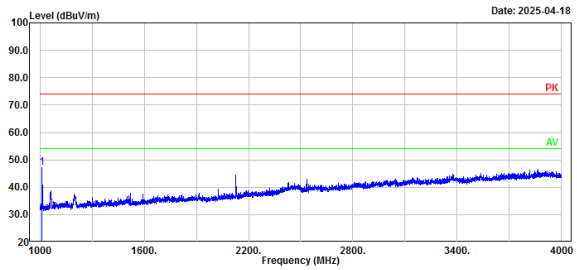
Serial No.: 314Y-1
Tester: Leo Xiao



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	4824.00	49.04	-8.58	40.46	74.00	33.54	Peak
2	7236.00	47.24	-3.67	43.57	74.00	30.43	Peak
3	17930.00	48.20	10.95	59.15	74.00	14.85	Peak
4	17930.00	36.37	10.95	47.32	54.00	6.68	Average

802.11g Chain1, Middle Channel, Horizontal

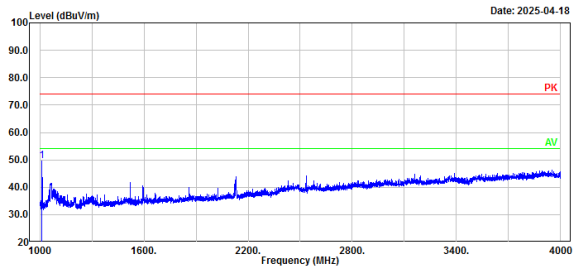
Project No.: 2502S52446E-RF Serial No.: 314Y-1
Polarization: Horizontal Tester: Leo Xiao
Test Mode: Transmitting
Note: 802.11g middle channel 2437MHz Chain1
Peak:RBW:1MHz,VBW:3MHz



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	1013.20	61.51	-14.44	47.07	74.00	26.93	Peak

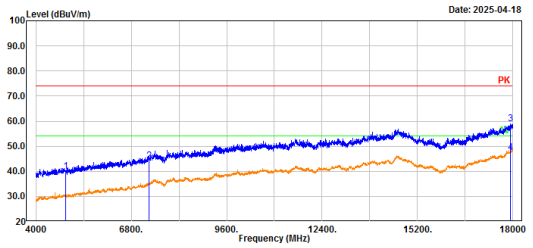
802.11g Chain1, Middle Channel, Vertical

Project No.: 2502S52446E-RF Serial No.: 314Y-1
Polarization: Vertical Tester: Leo Xiao
Test Mode: Transmitting
Note: 802.11g middle channel 2437MHz Chain1
Peak:RBW:1MHz,VBW:3MHz



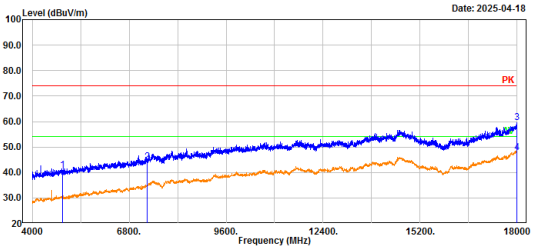
No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	1013.20	64.12	-14.44	49.68	74.00	24.32	Peak

Project No.: 2502S52446E-RF Serial No.: 314Y-1
Polarization: Horizontal Tester: Leo Xiao
Test Mode: Transmitting
Note: 802.11g middle channel 2437MHz Chain1
Peak:RBW:1MHz,VBW:3MHz Ave:RBW:1MHz,VBW:5kHz



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	4874.00	48.55	-8.50	40.05	74.00	33.95	Peak
2	7311.00	47.29	-3.27	44.02	74.00	29.98	Peak
3	17916.00	48.13	10.84	58.97	74.00	15.03	Peak
4	17916.00	36.56	10.84	47.40	54.00	6.60	Average

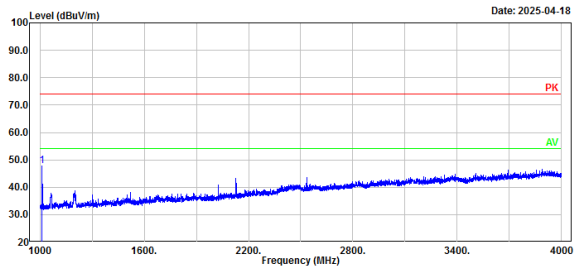
Project No.: 2502S52446E-RF Serial No.: 314Y-1
Polarization: Vertical Tester: Leo Xiao
Test Mode: Transmitting
Note: 802.11g middle channel 2437MHz Chain1
Peak:RBW:1MHz,VBW:3MHz Ave:RBW:1MHz,VBW:5kHz



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	4874.00	49.44	-8.50	40.94	74.00	33.06	Peak
2	7311.00	47.34	-3.27	44.07	74.00	29.93	Peak
3	17997.20	48.03	11.38	59.41	74.00	14.59	Peak
4	17997.20	36.40	11.38	47.78	54.00	6.22	Average

802.11g Chain1, High Channel, Horizontal

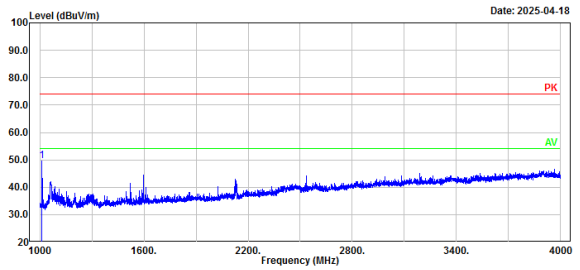
Project No.: 2502S52446E-RF
Polarization: Horizontal
Test Mode: Transmitting
Note: 802.11g high channel 2462MHz Chain1
Peak:RBW:1MHz,VBW:3MHz
Serial No.: 314Y-1
Tester: Leo Xiao



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	1013.20	62.12	-14.44	47.68	74.00	26.32	Peak

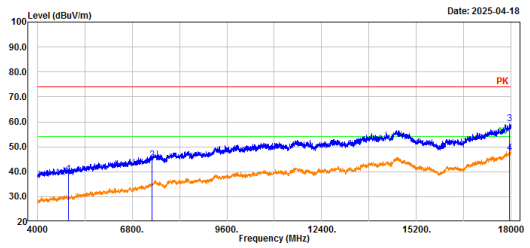
802.11g Chain1, High Channel, Vertical

Project No.: 2502S52446E-RF
Polarization: Vertical
Test Mode: Transmitting
Note: 802.11g high channel 2462MHz Chain1
Peak:RBW:1MHz,VBW:3MHz
Serial No.: 314Y-1
Tester: Leo Xiao



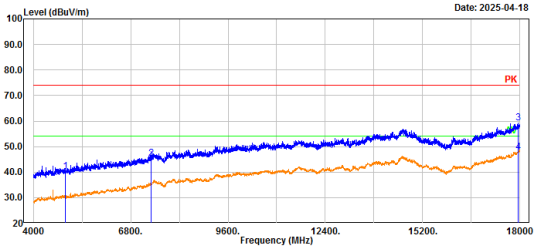
No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	1013.20	64.06	-14.44	49.62	74.00	24.38	Peak

Project No.: 2502S52446E-RF
Polarization: Horizontal
Test Mode: Transmitting
Note: 802.11g high channel 2462MHz Chain1
Peak:RBW:1MHz,VBW:3MHz Ave:RBW:1MHz,VBW:5kHz
Serial No.: 314Y-1
Tester: Leo Xiao



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	4924.00	47.62	-8.47	39.15	74.00	34.85	Peak
2	7386.00	47.38	-2.71	44.67	74.00	29.33	Peak
3	17949.60	48.03	11.09	59.12	74.00	14.88	Peak
4	17949.60	36.52	11.09	47.61	54.00	6.39	Average

Project No.: 2502S52446E-RF
Polarization: Vertical
Test Mode: Transmitting
Note: 802.11g high channel 2462MHz Chain1
Peak:RBW:1MHz,VBW:3MHz Ave:RBW:1MHz,VBW:5kHz
Serial No.: 314Y-1
Tester: Leo Xiao

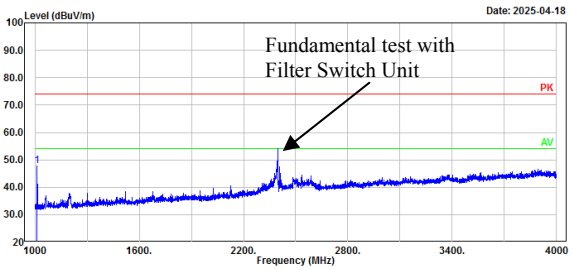


No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	4924.00	48.81	-8.47	40.34	74.00	33.66	Peak
2	7386.00	47.97	-2.71	45.26	74.00	28.74	Peak
3	17944.00	48.09	11.04	59.13	74.00	14.87	Peak
4	17944.00	36.74	11.04	47.78	54.00	6.22	Average

802. 11n20 MIMO, Low Channel, Horizontal

Project No.: 2502S52446E-RF
Polarization: Horizontal
Test Mode: Transmitting
Note: 802.11n20 low channel 2412MHz
Peak:RBW:1MHz,VBW:3MHz

Serial No.: 314Y-1
Tester: Leo Xiao

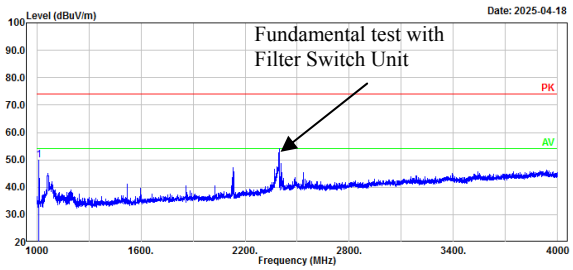


No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	1013.20	62.27	-14.44	47.83	74.00	26.17	Peak

802. 11n20 MIMO, Low Channel, Vertical

Project No.: 2502S52446E-RF
Polarization: Vertical
Test Mode: Transmitting
Note: 802.11n20 low channel 2412MHz
Peak:RBW:1MHz,VBW:3MHz

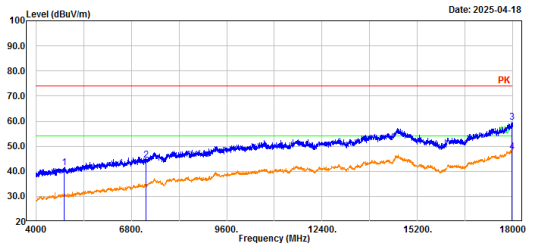
Serial No.: 314Y-1
Tester: Leo Xiao



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	1013.20	64.28	-14.44	49.84	74.00	24.16	Peak

Project No.: 2502S52446E-RF
Polarization: Horizontal
Test Mode: Transmitting
Note: 802.11n20 low channel 2412MHz
Peak:RBW:1MHz,VBW:3MHz Ave:RBW:1MHz,VBW:5kHz

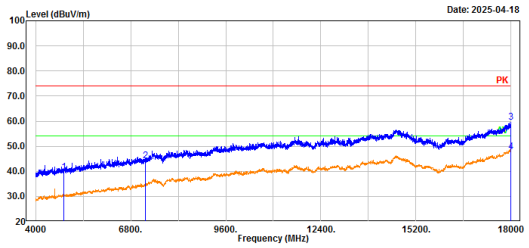
Serial No.: 314Y-1
Tester: Leo Xiao



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	4824.00	49.94	-8.58	41.36	74.00	32.64	Peak
2	7236.00	48.14	-3.67	44.47	74.00	29.53	Peak
3	17977.60	48.19	11.28	59.47	74.00	14.53	Peak
4	17977.60	36.38	11.28	47.66	54.00	6.34	Average

Project No.: 2502S52446E-RF
Polarization: Vertical
Test Mode: Transmitting
Note: 802.11n20 low channel 2412MHz
Peak:RBW:1MHz,VBW:3MHz Ave:RBW:1MHz,VBW:5kHz

Serial No.: 314Y-1
Tester: Leo Xiao

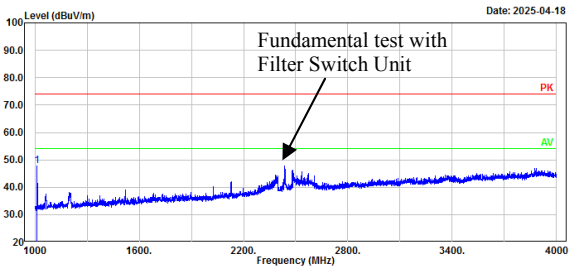


No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	4824.00	48.12	-8.58	39.54	74.00	34.46	Peak
2	7236.00	47.77	-3.67	44.10	74.00	29.90	Peak
3	17991.60	48.09	11.35	59.44	74.00	14.56	Peak
4	17991.60	36.47	11.35	47.82	54.00	6.18	Average

802. 11n20 MIMO, Middle Channel, Horizontal

Project No.: 2502S52446E-RF
Polarization: Horizontal
Test Mode: Transmitting
Note: 802.11n20 middle channel 2437MHz
Peak:RBW:1MHz,VBW:3MHz

Serial No.: 314Y-1
Tester: Leo Xiao

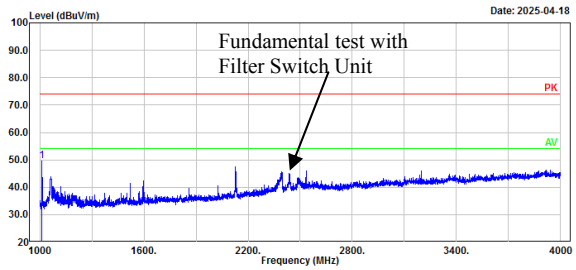


No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	1013.20	62.24	-14.44	47.80	74.00	26.20	Peak

802. 11n20 MIMO, Middle Channel, Vertical

Project No.: 2502S52446E-RF
Polarization: Vertical
Test Mode: Transmitting
Note: 802.11n20 middle channel 2437MHz
Peak:RBW:1MHz,VBW:3MHz

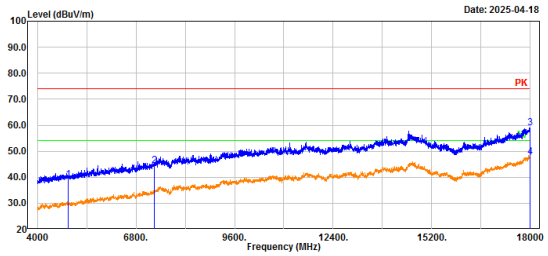
Serial No.: 314Y-1
Tester: Leo Xiao



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	1013.20	63.93	-14.44	49.49	74.00	24.51	Peak

Project No.: 2502S52446E-RF
Polarization: Horizontal
Test Mode: Transmitting
Note: 802.11n20 middle channel 2437MHz
Peak:RBW:1MHz,VBW:3MHz Ave:RBW:1MHz,VBW:5kHz

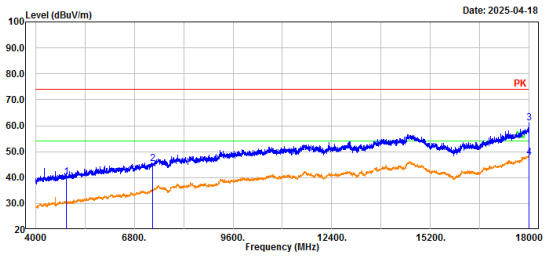
Serial No.: 314Y-1
Tester: Leo Xiao



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	4874.00	47.44	-8.50	38.94	74.00	35.06	Peak
2	7311.00	47.82	-3.27	44.55	74.00	29.45	Peak
3	17991.60	47.55	11.35	58.90	74.00	15.10	Peak
4	17991.60	36.40	11.35	47.75	54.00	6.25	Average

Project No.: 2502S52446E-RF
Polarization: Vertical
Test Mode: Transmitting
Note: 802.11n20 middle channel 2437MHz
Peak:RBW:1MHz,VBW:3MHz Ave:RBW:1MHz,VBW:5kHz

Serial No.: 314Y-1
Tester: Leo Xiao

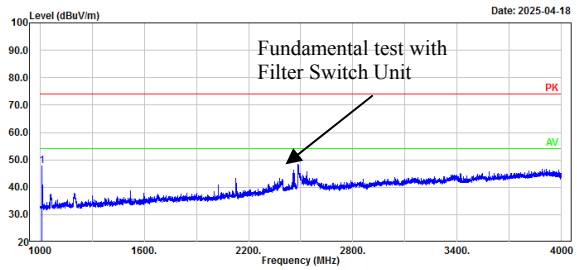


No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	4874.00	48.63	-8.50	40.13	74.00	33.87	Peak
2	7311.00	48.59	-3.27	45.32	74.00	28.68	Peak
3	17986.00	49.68	11.32	61.00	74.00	13.00	Peak
4	17986.00	36.36	11.32	47.68	54.00	6.32	Average

802. 11n20 MIMO, High Channel, Horizontal

Project No.: 2502S52446E-RF
Polarization: Horizontal
Test Mode: Transmitting
Note: 802.11n20 high channel 2462MHz
Peak:RBW:1MHz,VBW:3MHz

Serial No.: 314Y-1
Tester: Leo Xiao

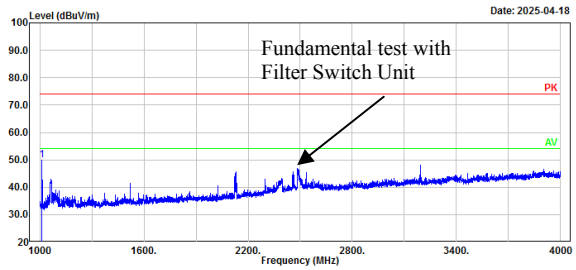


No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	1013.20	62.13	-14.44	47.69	74.00	26.31	Peak

802. 11n20 MIMO, High Channel, Vertical

Project No.: 2502S52446E-RF
Polarization: Vertical
Test Mode: Transmitting
Note: 802.11n20 high channel 2462MHz
Peak:RBW:1MHz,VBW:3MHz

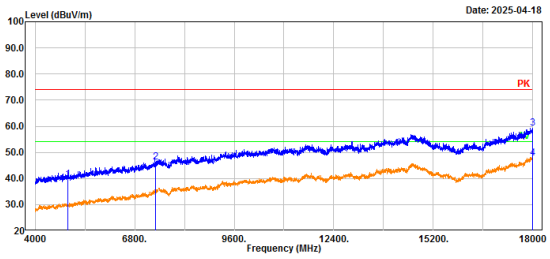
Serial No.: 314Y-1
Tester: Leo Xiao



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	1013.20	64.40	-14.44	49.96	74.00	24.04	Peak

Project No.: 2502S52446E-RF
Polarization: Horizontal
Test Mode: Transmitting
Note: 802.11n20 high channel 2462MHz
Peak:RBW:1MHz,VBW:3MHz Ave:RBW:1MHz,VBW:5kHz

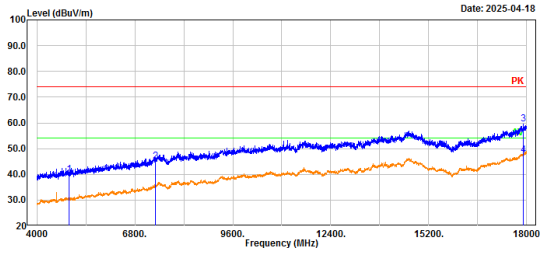
Serial No.: 314Y-1
Tester: Leo Xiao



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	4924.00	48.24	-8.47	39.77	74.00	34.23	Peak
2	7386.00	49.02	-2.71	46.31	74.00	27.69	Peak
3	17986.00	48.05	11.32	59.37	74.00	14.63	Peak
4	17986.00	36.43	11.32	47.75	54.00	6.25	Average

Project No.: 2502S52446E-RF
Polarization: Vertical
Test Mode: Transmitting
Note: 802.11n20 high channel 2462MHz
Peak:RBW:1MHz,VBW:3MHz Ave:RBW:1MHz,VBW:5kHz

Serial No.: 314Y-1
Tester: Leo Xiao

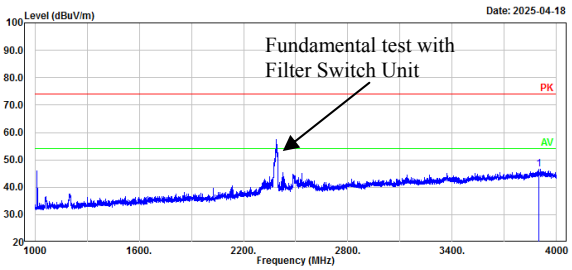


No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	4924.00	48.30	-8.47	39.83	74.00	34.17	Peak
2	7386.00	47.80	-2.71	45.09	74.00	28.91	Peak
3	17902.00	48.68	10.74	59.42	74.00	14.58	Peak
4	17902.00	36.69	10.74	47.43	54.00	6.57	Average

802. 11n40 MIMO, Low Channel, Horizontal

Project No.: 2502S52446E-RF
Polarization: Horizontal
Test Mode: Transmitting
Note: 802.11n40 low channel 2422MHz
Peak:RBW:1MHz,VBW:3MHz

Serial No.: 314Y-1
Tester: Leo Xiao

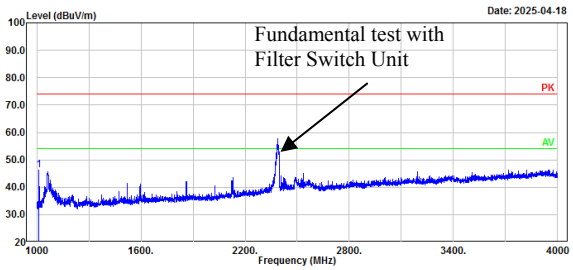


No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	3896.20	50.13	-3.63	46.50	74.00	27.50	Peak

802. 11n40 MIMO, Low Channel, Vertical

Project No.: 2502S52446E-RF
Polarization: Vertical
Test Mode: Transmitting
Note: 802.11n40 low channel 2422MHz
Peak:RBW:1MHz,VBW:3MHz

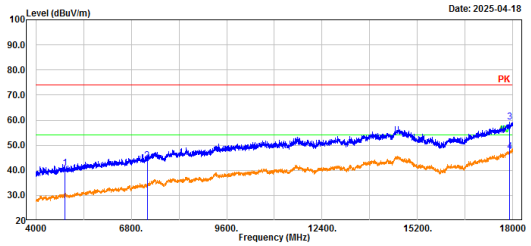
Serial No.: 314Y-1
Tester: Leo Xiao



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	1013.20	60.63	-14.44	46.19	74.00	27.81	Peak

Project No.: 2502S52446E-RF
Polarization: Horizontal
Test Mode: Transmitting
Note: 802.11n40 low channel 2422MHz
Peak:RBW:1MHz,VBW:3MHz Ave:RBW:1MHz,VBW:5kHz

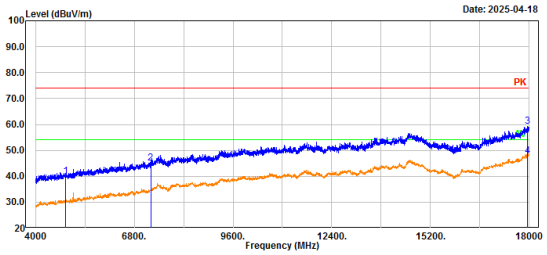
Serial No.: 314Y-1
Tester: Leo Xiao



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	4844.00	49.23	-8.53	40.70	74.00	33.30	Peak
2	7266.00	47.29	-3.52	43.77	74.00	30.23	Peak
3	17902.00	48.65	10.74	59.39	74.00	14.61	Peak
4	17902.00	36.67	10.74	47.41	54.00	6.59	Average

Project No.: 2502S52446E-RF
Polarization: Vertical
Test Mode: Transmitting
Note: 802.11n40 low channel 2422MHz
Peak:RBW:1MHz,VBW:3MHz Ave:RBW:1MHz,VBW:5kHz

Serial No.: 314Y-1
Tester: Leo Xiao

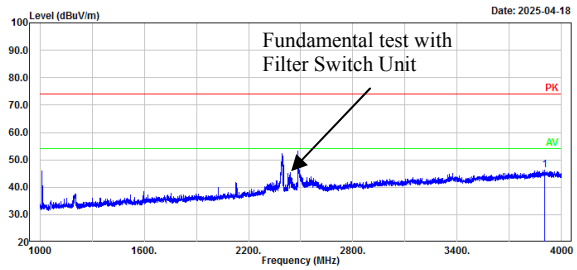


No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	4844.00	48.60	-8.53	40.07	74.00	33.93	Peak
2	7266.00	48.54	-3.52	45.02	74.00	28.98	Peak
3	17955.20	48.02	11.12	59.14	74.00	14.86	Peak
4	17955.20	36.79	11.12	47.91	54.00	6.09	Average

802. 11n40 MIMO, Middle Channel, Horizontal

Project No.: 2502S52446E-RF
Polarization: Horizontal
Test Mode: Transmitting
Note: 802.11n40 middle channel 2437MHz
Peak:RBW:1MHz,VBW:3MHz

Serial No.: 314Y-1
Tester: Leo Xiao

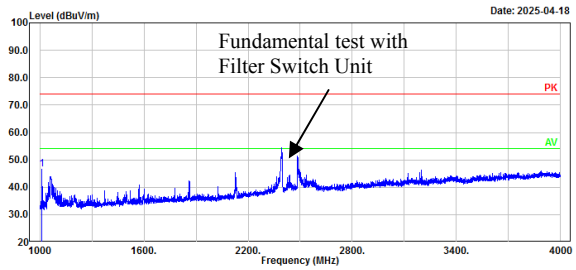


No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	3904.60	49.95	-3.65	46.30	74.00	27.70	Peak

802. 11n40 MIMO, Middle Channel, Vertical

Project No.: 2502S52446E-RF
Polarization: Vertical
Test Mode: Transmitting
Note: 802.11n40 middle channel 2437MHz
Peak:RBW:1MHz,VBW:3MHz

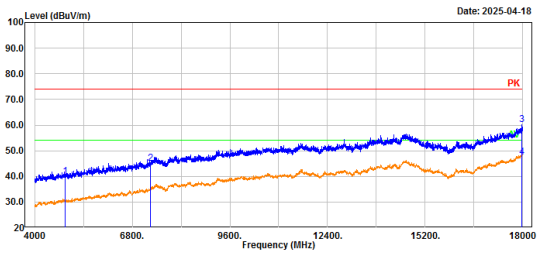
Serial No.: 314Y-1
Tester: Leo Xiao



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	1013.20	61.11	-14.44	46.67	74.00	27.33	Peak

Project No.: 2502S52446E-RF
Polarization: Horizontal
Test Mode: Transmitting
Note: 802.11n40 middle channel 2437MHz
Peak:RBW:1MHz,VBW:3MHz Ave:RBW:1MHz,VBW:5kHz

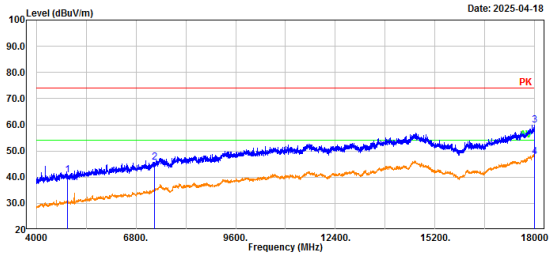
Serial No.: 314Y-1
Tester: Leo Xiao



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	4874.00	48.44	-8.50	39.94	74.00	34.06	Peak
2	7311.00	48.43	-3.27	45.16	74.00	28.84	Peak
3	17966.40	48.81	11.20	60.01	74.00	13.99	Peak
4	17966.40	36.38	11.20	47.58	54.00	6.42	Average

Project No.: 2502S52446E-RF
Polarization: Vertical
Test Mode: Transmitting
Note: 802.11n40 middle channel 2437MHz
Peak:RBW:1MHz,VBW:3MHz Ave:RBW:1MHz,VBW:5kHz

Serial No.: 314Y-1
Tester: Leo Xiao

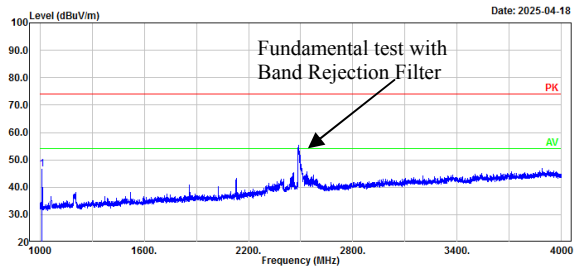


No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	4874.00	49.40	-8.50	40.90	74.00	33.10	Peak
2	7311.00	48.82	-3.27	45.55	74.00	28.45	Peak
3	17994.40	48.55	11.37	59.92	74.00	14.08	Peak
4	17994.40	36.45	11.37	47.82	54.00	6.18	Average

802. 11n40 MIMO, High Channel, Horizontal

Project No.: 2502S52446E-RF
Polarization: Horizontal
Test Mode: Transmitting
Note: 802.11n40 high channel 2452MHz
Peak:RBW:1MHz,VBW:3MHz

Serial No.: 314Y-1
Tester: Leo Xiao

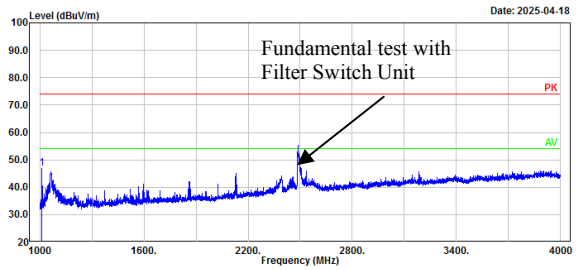


No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	1013.20	61.00	-14.44	46.56	74.00	27.44	Peak

802. 11n40 MIMO, High Channel, Vertical

Project No.: 2502S52446E-RF
Polarization: Vertical
Test Mode: Transmitting
Note: 802.11n40 high channel 2452MHz
Peak:RBW:1MHz,VBW:3MHz

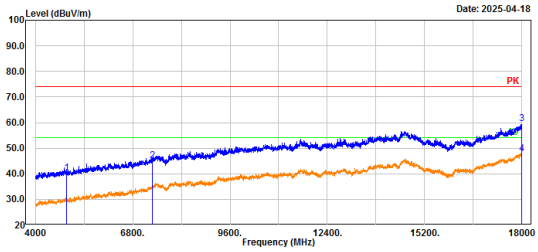
Serial No.: 314Y-1
Tester: Leo Xiao



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	1013.20	61.25	-14.44	46.81	74.00	27.19	Peak

Project No.: 2502S52446E-RF
Polarization: Horizontal
Test Mode: Transmitting
Note: 802.11n40 high channel 2452MHz
Peak:RBW:1MHz,VBW:3MHz Ave:RBW:1MHz,VBW:5kHz

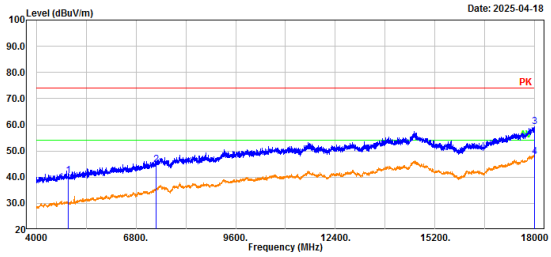
Serial No.: 314Y-1
Tester: Leo Xiao



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	4904.00	48.76	-8.46	40.30	74.00	33.70	Peak
2	7356.00	47.98	-2.92	45.06	74.00	28.94	Peak
3	17999.00	48.10	11.38	59.48	74.00	14.52	Peak
4	17999.00	36.48	11.38	47.86	54.00	6.14	Average

Project No.: 2502S52446E-RF
Polarization: Vertical
Test Mode: Transmitting
Note: 802.11n40 high channel 2452MHz
Peak:RBW:1MHz,VBW:3MHz Ave:RBW:1MHz,VBW:5kHz

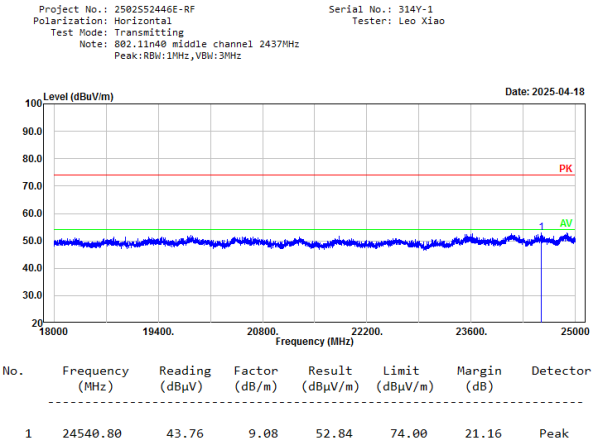
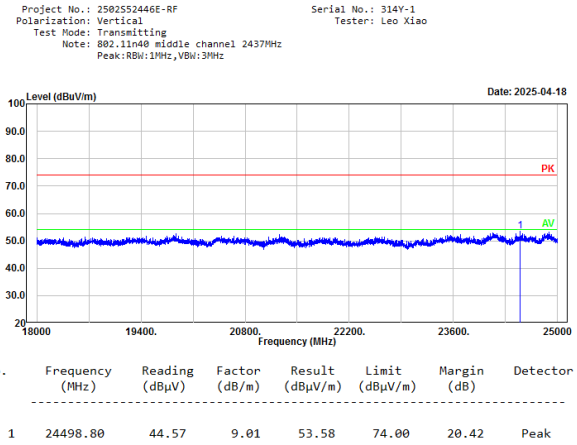
Serial No.: 314Y-1
Tester: Leo Xiao



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	4904.00	48.93	-8.46	40.47	74.00	33.53	Peak
2	7356.00	47.61	-2.92	44.69	74.00	29.31	Peak
3	17991.60	47.98	11.35	59.33	74.00	14.67	Peak
4	17991.60	36.34	11.35	47.69	54.00	6.31	Average

18GHz -25GHz:

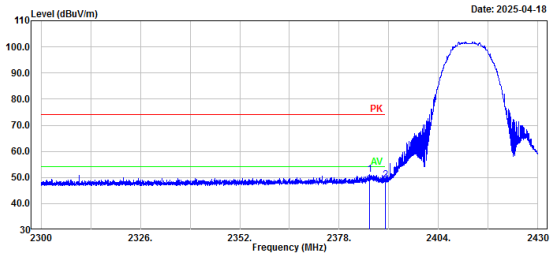
Note: No Emission was detected in the range 18-25GHz, the maximum output power mode and channel: 802.11n ht40 mode middle channel was tested.

802.11 n40 MIMO, Middle Channel, Horizontal	802.11 n40 MIMO, Middle Channel, Vertical
 No. Frequency (MHz) Reading (dBμV) Factor (dB/m) Result (dBμV/m) Limit (dBμV/m) Margin (dB) Detector 1 24540.80 43.76 9.08 52.84 74.00 21.16 Peak	 No. Frequency (MHz) Reading (dBμV) Factor (dB/m) Result (dBμV/m) Limit (dBμV/m) Margin (dB) Detector 1 24498.80 44.57 9.01 53.58 74.00 20.42 Peak

Bandedge:

802.11b Chain0 low channel Bandedge Horizontal

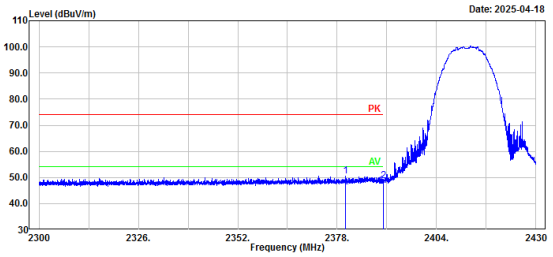
Project No.: 2502S52446E-RF Serial No.: 314Y-1
Polarization: Horizontal Tester: Leo Xiao
Test Mode: Transmitting
Note: 802.11b low channel 2412MHz Chain0
Peak:RBW:1MHz,VBW:3MHz



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	2386.03	51.51	-0.52	50.99	74.00	23.01	Peak
2	2390.00	49.41	-0.49	48.92	74.00	25.08	Peak

802.11b Chain0 low channel Bandedge Vertical

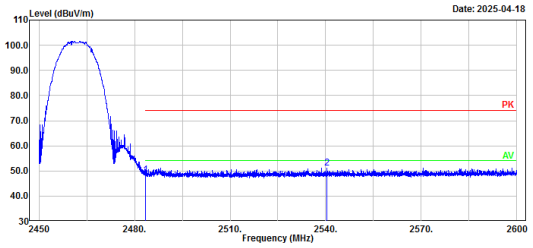
Project No.: 2502S52446E-RF Serial No.: 314Y-1
Polarization: Vertical Tester: Leo Xiao
Test Mode: Transmitting
Note: 802.11b low channel 2412MHz Chain0
Peak:RBW:1MHz,VBW:3MHz



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	2380.13	51.17	-0.56	50.61	74.00	23.39	Peak
2	2390.00	49.24	-0.49	48.75	74.00	25.25	Peak

802.11b Chain0 High Channel, Bandedge, Horizontal

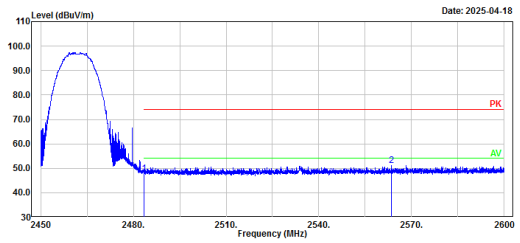
Project No.: 2502S52446E-RF Serial No.: 314Y-1
Polarization: Horizontal Tester: Leo Xiao
Test Mode: Transmitting
Note: 802.11b high channel 2462MHz Chain0
Peak:RBW:1MHz,VBW:3MHz



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	2483.50	48.54	-0.05	48.49	74.00	25.51	Peak
2	2540.48	50.86	0.27	51.13	74.00	22.87	Peak

802.11b Chain0 High Channel, Bandedge, Vertical

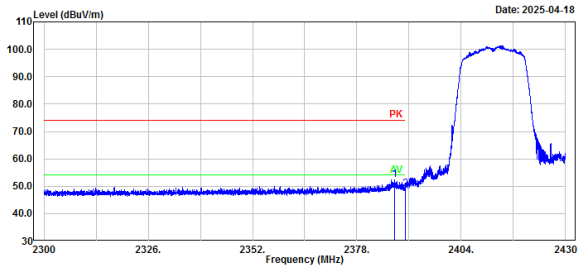
Project No.: 2502S52446E-RF Serial No.: 314Y-1
Polarization: Vertical Tester: Leo Xiao
Test Mode: Transmitting
Note: 802.11b high channel 2462MHz Chain0
Peak:RBW:1MHz,VBW:3MHz



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	2483.50	47.93	-0.05	47.88	74.00	26.12	Peak
2	2563.40	50.61	0.40	51.01	74.00	22.99	Peak

802. 11g Chain0, Low Channel, Bandedge, Horizontal

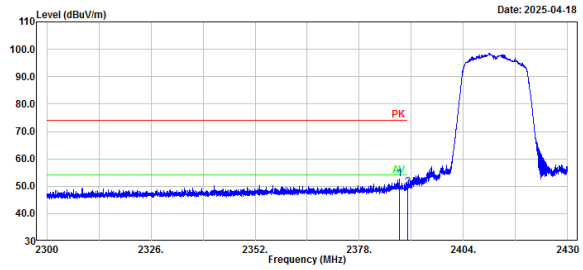
Project No.: 2502S52446E-RF Serial No.: 314Y-1
Polarization: Horizontal Tester: Leo Xiao
Test Mode: Transmitting
Note: 802.11g low channel 2412MHz Chain0
Peak:RBW:1MHz,VBW:3MHz



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	2387.41	52.97	-0.51	52.46	74.00	21.54	Peak
2	2390.00	49.62	-0.49	49.13	74.00	24.87	Peak

802. 11g Chain0, Low Channel, Bandedge, Vertical

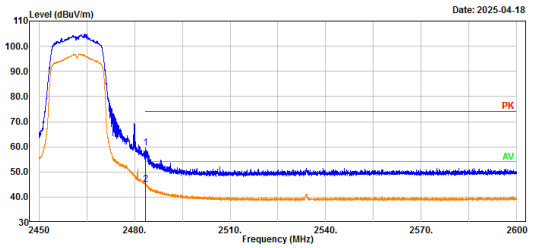
Project No.: 2502S52446E-RF Serial No.: 314Y-1
Polarization: Vertical Tester: Leo Xiao
Test Mode: Transmitting
Note: 802.11g low channel 2412MHz Chain0
Peak:RBW:1MHz,VBW:3MHz



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	2388.04	53.22	-0.51	52.71	74.00	21.29	Peak
2	2390.00	49.99	-0.49	49.50	74.00	24.50	Peak

802.11g Chain0, High Channel, Bandedge, Horizontal

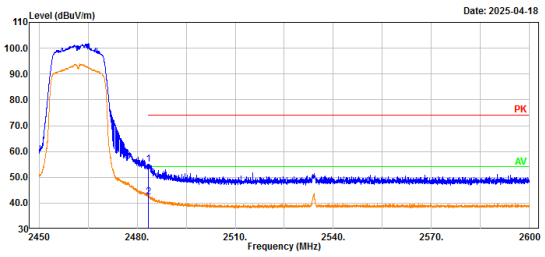
Project No.: 2502S52446E-RF Serial No.: 314Y-1
Polarization: Horizontal Tester: Leo Xiao
Test Mode: Transmitting
Note: 802.11g high channel 2462MHz Chain0
Peak:RBW:1MHz,VBW:3MHz Ave:RBW:1MHz,VBW:5kHz



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	2483.50	59.64	-0.05	59.59	74.00	14.41	Peak
2	2483.50	45.16	-0.05	45.11	54.00	8.89	Average

802. 11g Chain0, High Channel, Bandedge, Vertical

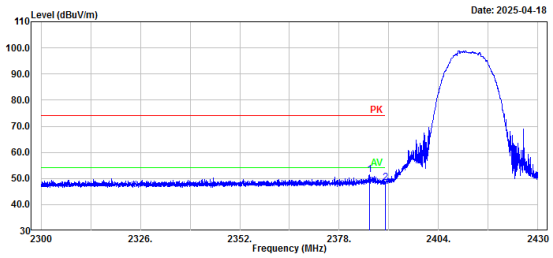
Project No.: 2502S52446E-RF Serial No.: 314Y-1
Polarization: Vertical Tester: Leo Xiao
Test Mode: Transmitting
Note: 802.11g high channel 2462MHz Chain0
Peak:RBW:1MHz,VBW:3MHz Ave:RBW:1MHz,VBW:5kHz



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	2483.50	55.25	-0.05	55.20	74.00	18.80	Peak
2	2483.50	42.53	-0.05	42.48	54.00	11.52	Average

802.11b Chain1 low channel Bandedge Horizontal

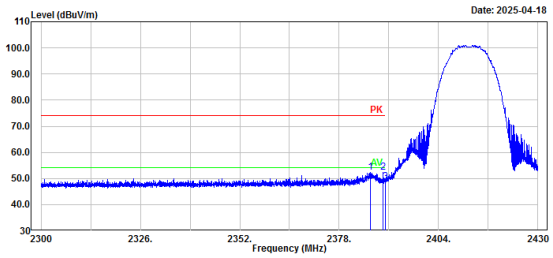
Project No.: 2502S52446E-RF Serial No.: 314Y-1
Polarization: Horizontal Tester: Leo Xiao
Test Mode: Transmitting
Note: 802.11b low channel 2412MHz Chain1
Peak:RBW:1MHz,VBW:3MHz



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	2385.96	51.93	-0.52	51.41	74.00	22.59	Peak
2	2390.00	48.95	-0.49	48.46	74.00	25.54	Peak

802.11b Chain1 low channel Bandedge Vertical

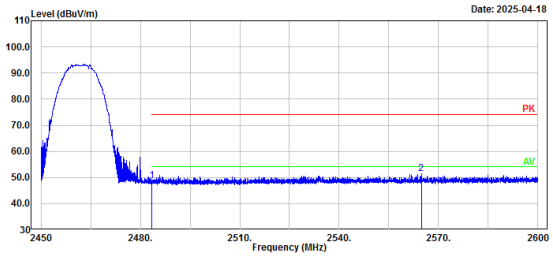
Project No.: 2502S52446E-RF Serial No.: 314Y-1
Polarization: Vertical Tester: Leo Xiao
Test Mode: Transmitting
Note: 802.11b low channel 2412MHz Chain1
Peak:RBW:1MHz,VBW:3MHz



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	2386.19	52.78	-0.52	52.26	74.00	21.74	Peak
2	2389.47	52.85	-0.49	52.36	74.00	21.64	Peak
3	2390.00	49.14	-0.49	48.65	74.00	25.35	Peak

802.11b Chain1, High Channel, Bandedge, Horizontal

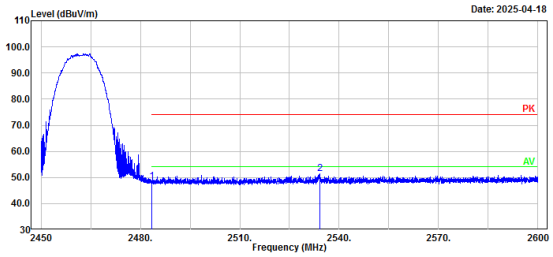
Project No.: 2502S52446E-RF Serial No.: 314Y-1
Polarization: Horizontal Tester: Leo Xiao
Test Mode: Transmitting
Note: 802.11b high channel 2462MHz Chain1
Peak:RBW:1MHz,VBW:3MHz



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	2483.50	48.91	-0.05	48.86	74.00	25.14	Peak
2	2564.78	50.90	0.40	51.30	74.00	22.70	Peak

802.11b Chain1, High Channel, Bandedge, Vertical

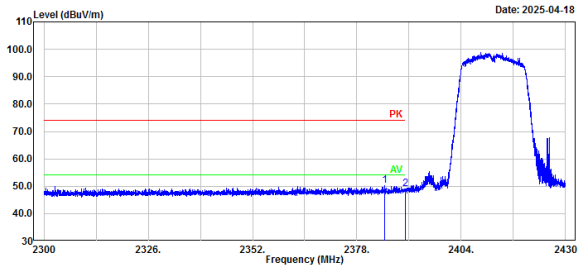
Project No.: 2502S52446E-RF Serial No.: 314Y-1
Polarization: Vertical Tester: Leo Xiao
Test Mode: Transmitting
Note: 802.11b high channel 2462MHz Chain1
Peak:RBW:1MHz,VBW:3MHz



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	2483.50	48.50	-0.05	48.45	74.00	25.55	Peak
2	2534.21	51.18	0.23	51.41	74.00	22.59	Peak

802. 11g Chain1, Low Channel, Bandedge, Horizontal

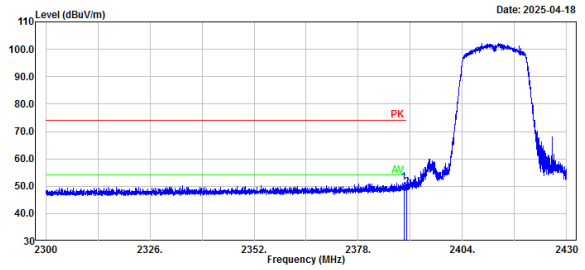
Project No.: 2502S52446E-RF Serial No.: 314Y-1
Polarization: Horizontal Tester: Leo Xiao
Test Mode: Transmitting
Note: 802.11g low channel 2412MHz Chain1
Peak:RBW:1MHz,VBW:3MHz



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	2385.02	50.81	-0.52	50.29	74.00	23.71	Peak
2	2390.00	49.53	-0.49	49.04	74.00	24.96	Peak

802. 11g Chain1, Low Channel, Bandedge, Vertical

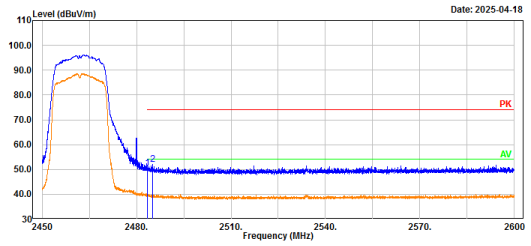
Project No.: 2502S52446E-RF Serial No.: 314Y-1
Polarization: Vertical Tester: Leo Xiao
Test Mode: Transmitting
Note: 802.11g low channel 2412MHz Chain1
Peak:RBW:1MHz,VBW:3MHz



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	2389.36	51.97	-0.49	51.48	74.00	22.52	Peak
2	2390.00	50.03	-0.49	49.54	74.00	24.46	Peak

802.11g Chain1, High Channel, Bandedge, Horizontal

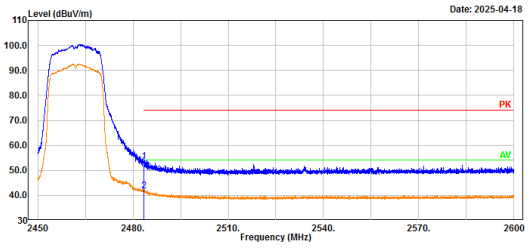
Project No.: 2502S52446E-RF Serial No.: 314Y-1
Polarization: Horizontal Tester: Leo Xiao
Test Mode: Transmitting
Note: 802.11g high channel 2462MHz Chain1
Peak:RBW:1MHz,VBW:3MHz Ave:RBW:1MHz,VBW:5kHz



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	2483.50	50.68	-0.05	50.63	74.00	23.37	Peak
2	2485.04	52.16	-0.04	52.12	74.00	21.88	Peak

802. 11g Chain1, High Channel, Bandedge, Vertical

Project No.: 2502S52446E-RF Serial No.: 314Y-1
Polarization: Vertical Tester: Leo Xiao
Test Mode: Transmitting
Note: 802.11g high channel 2462MHz Chain1
Peak:RBW:1MHz,VBW:3MHz Ave:RBW:1MHz,VBW:5kHz

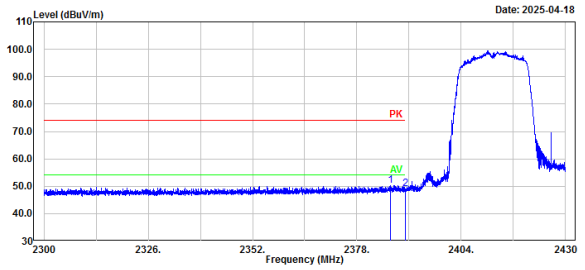


No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	2483.50	53.55	-0.05	53.50	74.00	20.50	Peak
2	2483.50	41.76	-0.05	41.71	54.00	12.29	Average

802. 11n20 MIMO, Low Channel, Bandedge, Horizontal

Project No.: 2502S52446E-RF
Polarization: Horizontal
Test Mode: Transmitting
Note: 802.11n20 low channel 2412MHz
Peak:RBW:1MHz,VBW:3MHz

Serial No.: 314Y-1
Tester: Leo Xiao

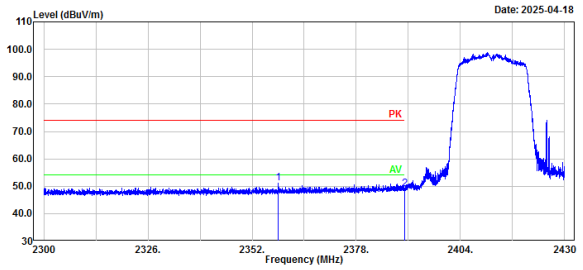


No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	2386.37	50.81	-0.52	50.29	74.00	23.71	Peak
2	2390.00	49.42	-0.49	48.93	74.00	25.07	Peak

802. 11n20 MIMO, Low Channel, Bandedge, Vertical

Project No.: 2502S52446E-RF
Polarization: Vertical
Test Mode: Transmitting
Note: 802.11n20 low channel 2412MHz
Peak:RBW:1MHz,VBW:3MHz

Serial No.: 314Y-1
Tester: Leo Xiao

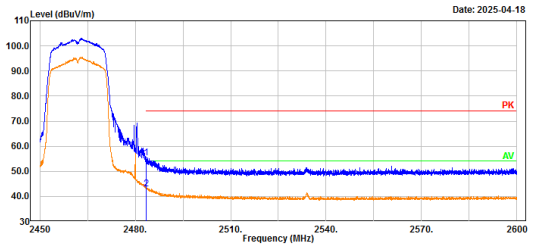


No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	2358.53	51.87	-0.69	51.18	74.00	22.82	Peak
2	2390.00	49.47	-0.49	48.98	74.00	25.02	Peak

802.11n20, High Channel MIMO, Bandedge, Horizontal

Project No.: 2502S52446E-RF
Polarization: Horizontal
Test Mode: Transmitting
Note: 802.11n20 high channel 2462MHz
Peak:RBW:1MHz,VBW:3MHz Ave:RBW:1MHz,VBW:5kHz

Serial No.: 314Y-1
Tester: Leo Xiao

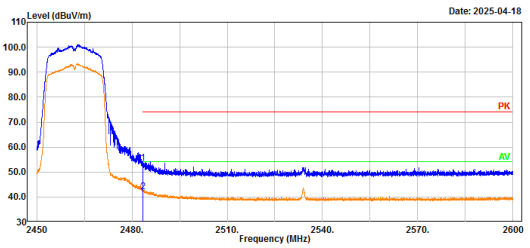


No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	2483.50	55.50	-0.05	55.45	74.00	18.55	Peak
2	2483.50	43.09	-0.05	43.04	54.00	10.96	Average

802. 11n20 MIMO, High Channel, Bandedge, Vertical

Project No.: 2502S52446E-RF
Polarization: Vertical
Test Mode: Transmitting
Note: 802.11n20 high channel 2462MHz
Peak:RBW:1MHz,VBW:3MHz Ave:RBW:1MHz,VBW:5kHz

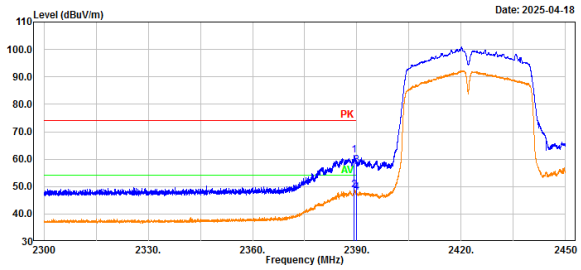
Serial No.: 314Y-1
Tester: Leo Xiao



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	2483.50	53.72	-0.05	53.67	74.00	20.33	Peak
2	2483.50	42.22	-0.05	42.17	54.00	11.83	Average

802. 11n40 MIMO, Low Channel, Bandedge, Horizontal

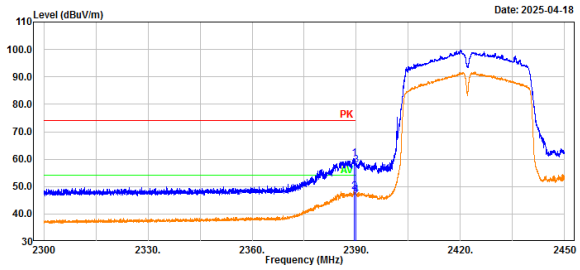
Project No.: 2502S52446E-RF Serial No.: 314Y-1
Polarization: Horizontal Tester: Leo Xiao
Test Mode: Transmitting
Note: 802.11n40 low channel 2422MHz
Peak:RBW:1MHz,VBW:3MHz Ave:RBW:1MHz,VBW:5kHz



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	2389.22	61.85	-0.50	61.35	74.00	12.65	Peak
2	2389.22	49.17	-0.50	48.67	54.00	5.33	Average
3	2390.00	58.12	-0.49	57.63	74.00	16.37	Peak
4	2390.00	48.16	-0.49	47.67	54.00	6.33	Average

802. 11n40 MIMO, Low Channel, Bandedge, Vertical

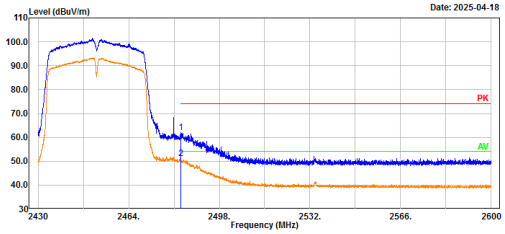
Project No.: 2502S52446E-RF Serial No.: 314Y-1
Polarization: Vertical Tester: Leo Xiao
Test Mode: Transmitting
Note: 802.11n40 low channel 2422MHz
Peak:RBW:1MHz,VBW:3MHz Ave:RBW:1MHz,VBW:5kHz



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	2389.31	60.63	-0.49	60.14	74.00	13.86	Peak
2	2389.31	48.62	-0.49	48.13	54.00	5.87	Average
3	2390.00	58.21	-0.49	57.72	74.00	16.28	Peak
4	2390.00	47.48	-0.49	46.99	54.00	7.01	Average

802.11n40, High Channel MIMO, Bandedge, Horizontal

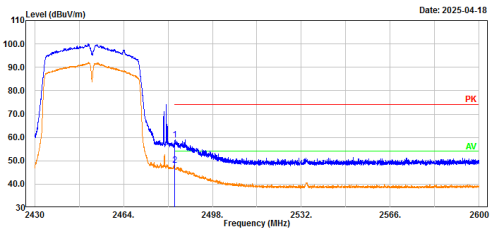
Project No.: 2502S52446E-RF Serial No.: 314Y-1
Polarization: Horizontal Tester: Leo Xiao
Test Mode: Transmitting
Note: 802.11n40 high channel 2452MHz
Peak:RBW:1MHz,VBW:3MHz Ave:RBW:1MHz,VBW:5kHz



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	2483.50	61.91	-0.05	61.86	74.00	12.14	Peak
2	2483.50	51.27	-0.05	51.22	54.00	2.78	Average

802. 11n40 MIMO, High Channel, Bandedge, Vertical

Project No.: 2502S52446E-RF Serial No.: 314Y-1
Polarization: Vertical Tester: Leo Xiao
Test Mode: Transmitting
Note: 802.11n40 high channel 2452MHz
Peak:RBW:1MHz,VBW:3MHz Ave:RBW:1MHz,VBW:5kHz



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	2483.50	58.92	-0.05	58.87	74.00	15.13	Peak
2	2483.50	48.12	-0.05	48.07	54.00	5.93	Average

5.3 6dB Emission Bandwidth

Serial Number:	314Y-2	Test Date:	2025-04-16
Test Site:	RF	Test Mode:	Transmitting
Tester:	Rini Yan	Test Result:	Pass

Environmental Conditions:					
Temperature: (℃)	25.9	Relative Humidity: (%)	51	ATM Pressure: (kPa)	101.1

Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Spectrum Analyzer	FSU 26	200445	2025/3/31	2026/3/30
Eastsheep	Coaxial Attenuator	2W-SMA-JK-6G-10dB	F-08-EM510	2024/6/7	2025/6/6

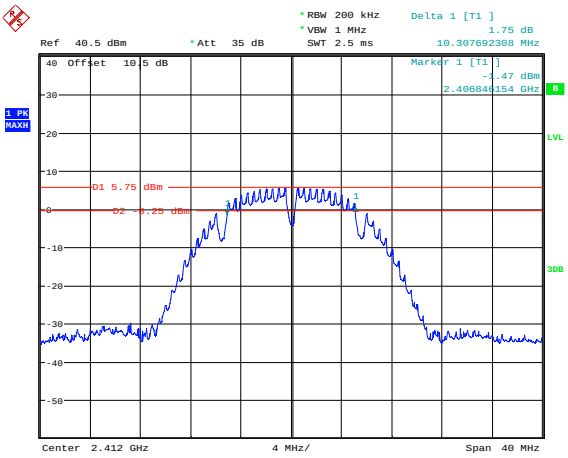
** Statement of Traceability: Bay Area Compliance Laboratories Corp. (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).*

Test Data:

Test Modes	Test Frequency (MHz)	6 dB Bandwidth (MHz)	Limit (MHz)	Verdict
802.11b	2412	10.308	0.5	Pass
	2437	10.372	0.5	Pass
	2462	10.269	0.5	Pass
802.11g	2412	16.167	0.5	Pass
	2437	16.128	0.5	Pass
	2462	16.103	0.5	Pass
802.11n ht20	2412	17.090	0.5	Pass
	2437	17.346	0.5	Pass
	2462	17.500	0.5	Pass
802.11n ht40	2422	36.103	0.5	Pass
	2437	35.974	0.5	Pass
	2452	36.051	0.5	Pass

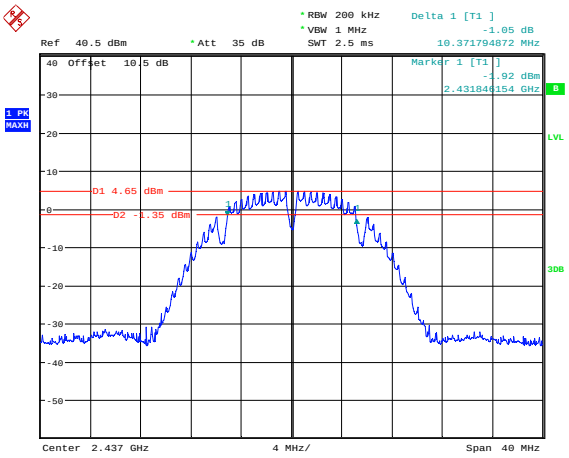
Note: Test only was performed at Chain 0.

802.11b_2412MHz



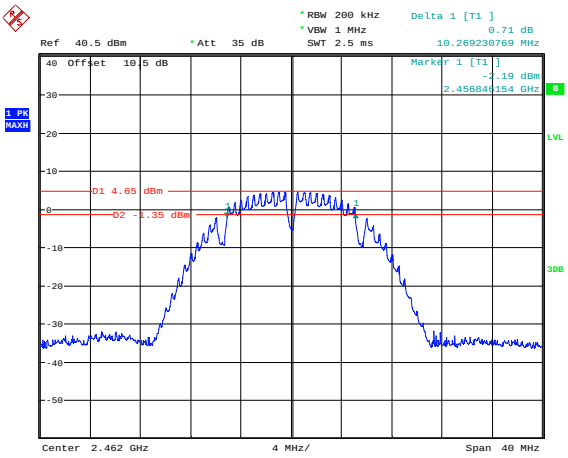
ProjectNo.:2502S52446E-RF Tester:Rini Yan
Date: 16.APR.2025 13:24:48

802.11b_2437MHz



ProjectNo.:2502S52446E-RF Tester:Rini Yan
Date: 16.APR.2025 13:29:31

802.11b_2462MHz



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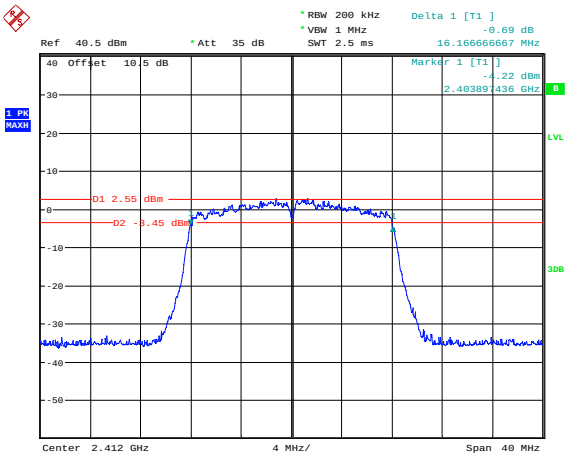
Date: 16.APR.2025 13:31:34

802.11g_2412MHz



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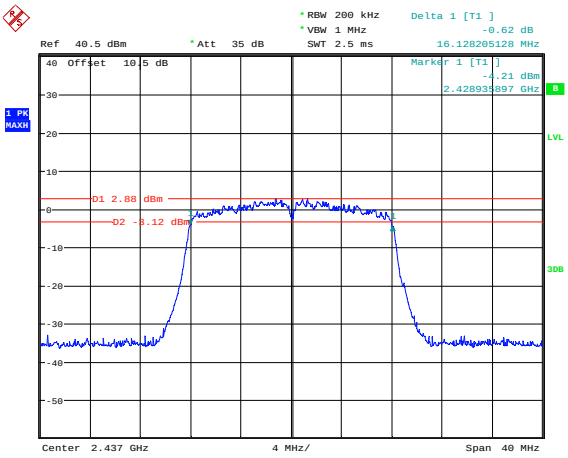
802.11g_2437MHz



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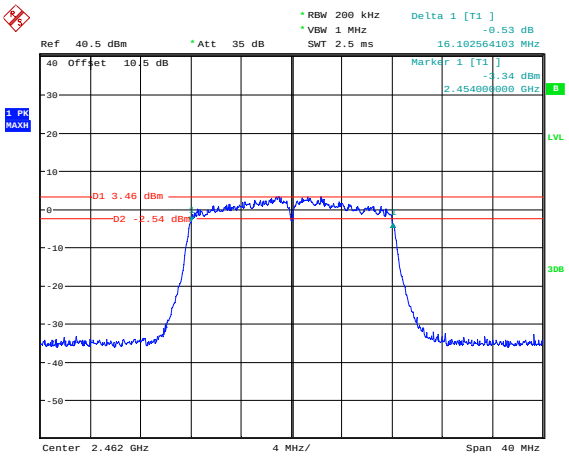
Date: 16.APR.2025 13:38:57

802.11g_2462MHz



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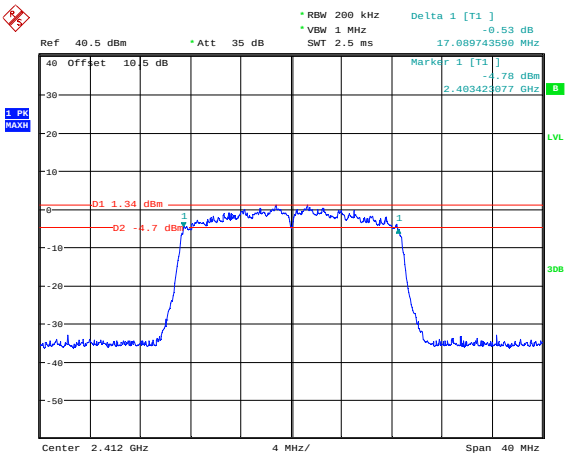
802.11n20_2412MHz



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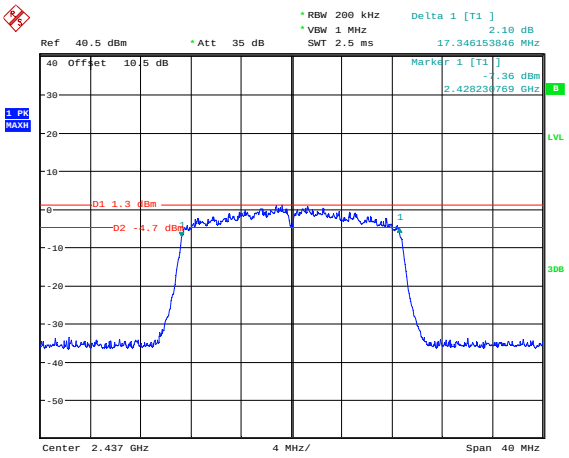
802.11n20_2437MHz



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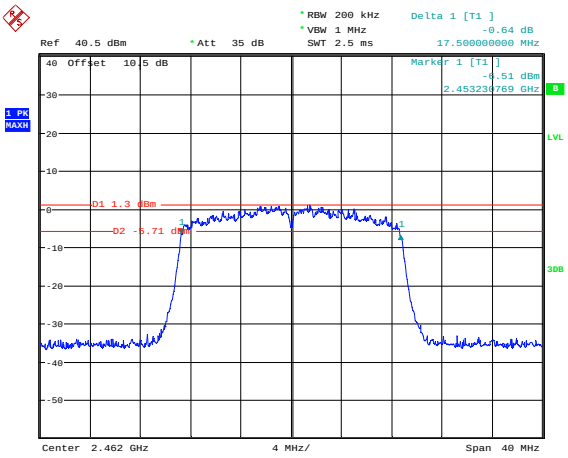
Date: 16.APR.2025 13:46:47

802.11n20_2462MHz



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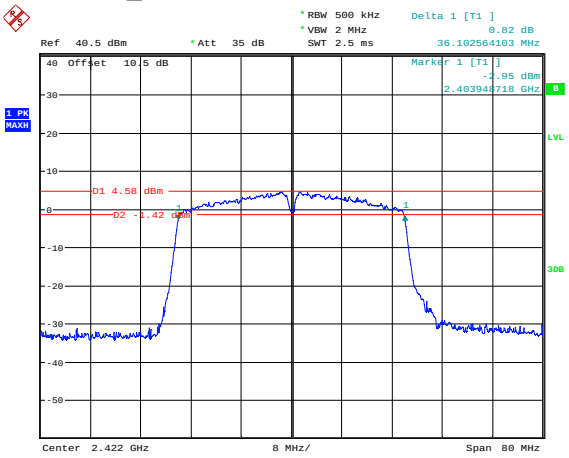
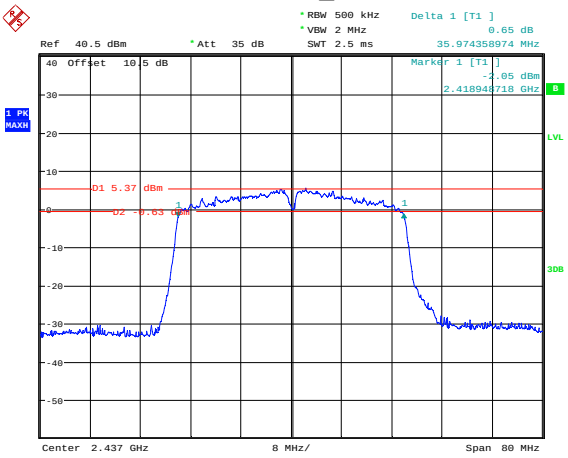
802.11n40_2412MHz



ProjectNo.:2502S52446E-RF Tester:Rini Yan
Date: 16.APR.2025 14:16:59

802.11n40_2437MHz



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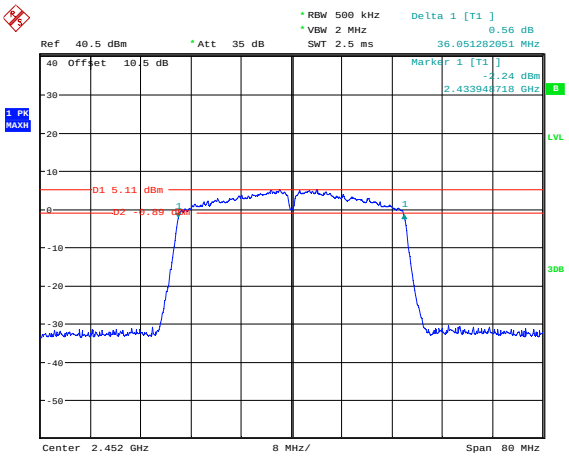
Date: 16.APR.2025 14:14:59

802.11n40_2452MHz



ProjectNo.:2502S52446E-RF Tester:Rini Yan
Date: 16.APR.2025 14:12:23

5.5 Maximum Conducted Output Power

Serial Number:	314Y-2	Test Date:	2025-04-16
Test Site:	RF	Test Mode:	Transmitting
Tester:	Rini Yan	Test Result:	Pass

Environmental Conditions:					
Temperature: (℃)	25.9	Relative Humidity: (%)	51	ATM Pressure: (kPa)	101.1

Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Eastsheep	Coaxial Attenuator	2W-SMA-JK-6G-10dB	F-08-EM510	2024/6/7	2025/6/6
Anritsu	Microwave Peak Power Sensor	MA24418A	12618	2024/8/27	2025/8/26

** Statement of Traceability: Bay Area Compliance Laboratories Corp. (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).*

Test Data:

Test Modes	Test Frequency (MHz)	Maximum Conducted Peak Output Power (dBm)			Limit (dBm)
		Chain 0	Chain 1	Total	
802.11b	2412	18.17	18.96	/	29.7
	2437	17.13	17.91	/	29.7
	2462	18.01	17.71	/	29.7
802.11g	2412	20.25	20.75	/	29.7
	2437	19.74	20.76	/	29.7
	2462	20.23	20.72	/	29.7
802.11n ht20	2412	18.35	19.22	21.82	29.7
	2437	17.64	18.62	21.17	29.7
	2462	18.23	18.46	21.36	29.7
802.11n ht40	2422	20.35	20.74	23.56	29.7
	2437	20.48	21.47	**24.01**	29.7
	2452	20.67	21.22	23.96	29.7

Note: The device employed Cyclic Delay Diversity (CDD) for 802.11 MIMO transmitting, per KDB 662911 D01 Multiple Transmitter Output v02r01, for power measurements on IEEE 802.11 devices:
Array Gain = 0 dB (i.e., no array gain) for NANT ≤ 4

Antenna Gain:	6.30	dBi	**Directional Gain:**	6.30	dBi

Note:
1. Directional gain = 6.3dBi > 6 dBi. the maximum output power limit should be reduced (6.3 -6) dB= 0.3dB.
2. for MIMO modes, Total Power (Chain 0+1) = 10*log [($10^{\text{Power Chain 0/10}}$) + ($10^{\text{Power Chain 1/10}}$)].

5.6 Power Spectral Density

Serial Number:	314Y-2	Test Date:	2025-04-16
Test Site:	RF	Test Mode:	Transmitting
Tester:	Rini Yan	Test Result:	Pass

Environmental Conditions:					
Temperature: (℃)	25.9	Relative Humidity: (%)	51	ATM Pressure: (kPa)	101.1

Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Spectrum Analyzer	FSU 26	200445	2025/3/31	2026/3/30
Eastsheep	Coaxial Attenuator	2W-SMA-JK-6G-10dB	F-08-EM510	2024/6/7	2025/6/6

** Statement of Traceability: Bay Area Compliance Laboratories Corp. (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).*

Test Data:

Test Modes	Test Frequency (MHz)	Reading(dBm/3kHz)		Maximum Power Spectral Density (dBm/3kHz)	Limit (dBm/3kHz)
		Chain 0	Chain 1		
802.11b	2412	-8.66	-7.07	/	7.70
	2437	-9.55	-9.6	/	7.70
	2462	-8.10	-9.15	/	7.70
802.11g	2412	-11.66	-11.05	/	7.70
	2437	-11.83	-11.65	/	7.70
	2462	-11.60	-11	/	7.70
802.11n ht20	2412	-14.41	-13.83	-10.88	4.70
	2437	-14.55	-13.72	-10.88	4.70
	2462	-14.30	-12.93	-10.33	4.70
802.11n ht40	2422	-13.34	-14.63	-10.14	4.70
	2437	-15.29	-14.16	-10.89	4.70
	2452	-13.81	-14.4	-10.29	4.70

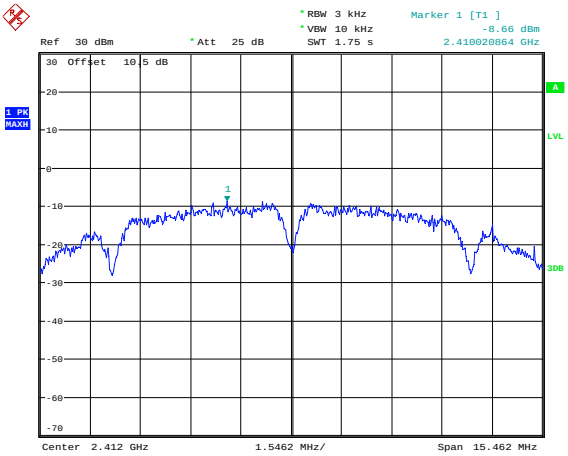
Note:
The device employed Cyclic Delay Diversity (CDD) for 802.11 MIMO transmitting, per KDB 662911 D01 Multiple Transmitter Output v02r01, for power spectral density (PSD) measurements on the devices:
Array Gain = 10 log (NANT/NSS) dB

Antenna Gain:	6.30	dBi	Directional Gain:	9.30	dBi

Note:
1. for MIMO mode; Directional gain = 9.3dBi > 6 dBi. the MIMO transmitting maximum power spectral density limit should be reduced (9.3 -6) dB= 3.3 dB.
2. for SISO mode, the max. antenna gain is greater than 6 dBi, Directional gain = 6.3dBi > 6 dBi. the maximum power spectral density limit for SISO mode should be reduced (6.3 -6) dB= 0.3dB.
3. for MIMO mode, Total PSD (Chain 0+1) = 10*log [($10^{\text{PSD Chain 0/10}}$) + ($10^{\text{PSD Chain 1/10}}$)].

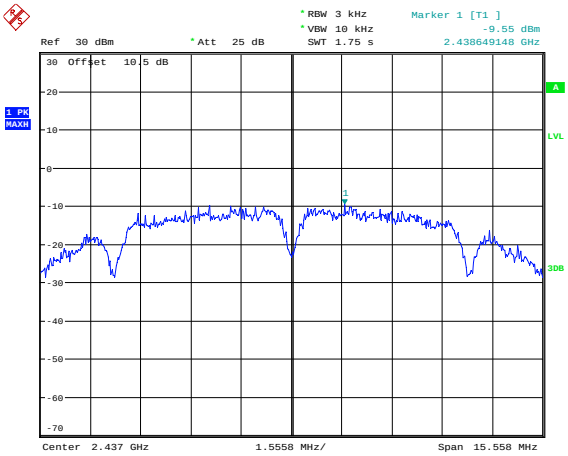
Chain 0:

802.11b_2412MHz



ProjectNo.:2502S52446E-RF Tester:Rini Yan
Date: 16.APR.2025 14:40:20

802.11b_2437MHz



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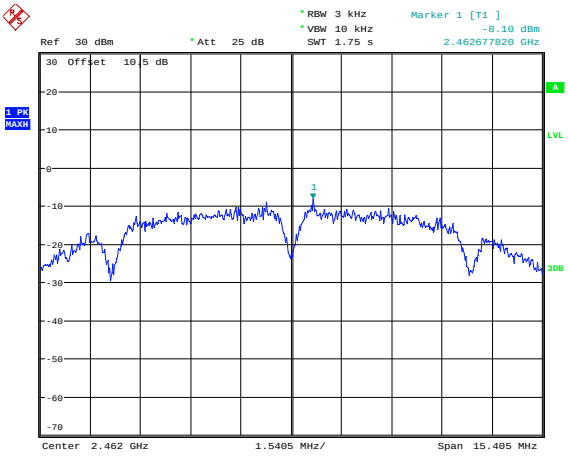
802.11b_2462MHz



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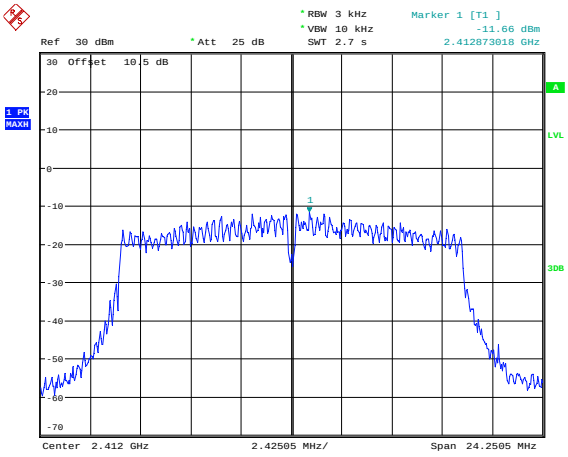
Date: 16.APR.2025 15:11:59

802.11g_2412MHz



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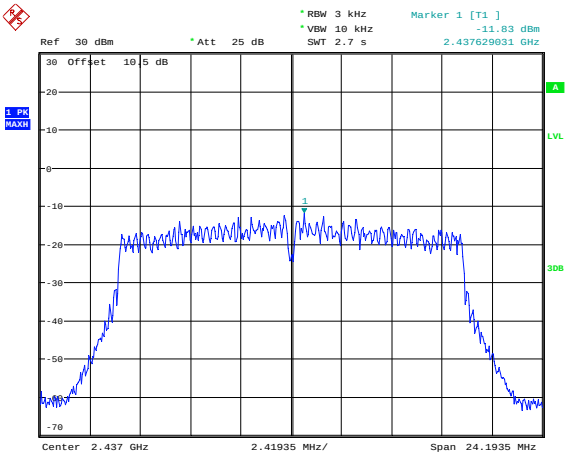

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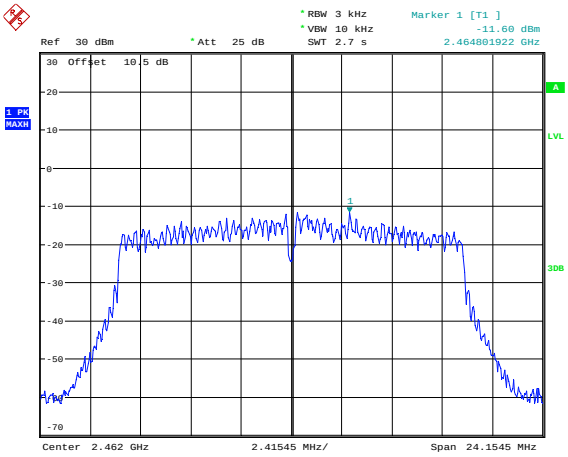
802.11g_2462MHz



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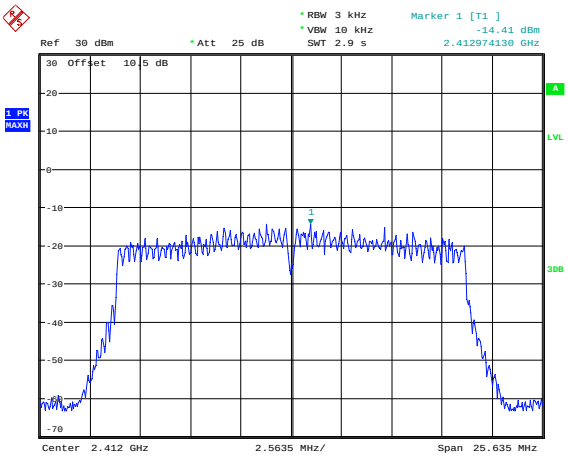
802.11n20_2412MHz



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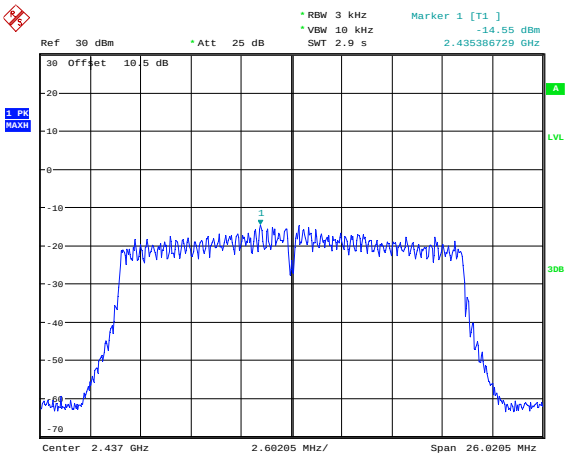

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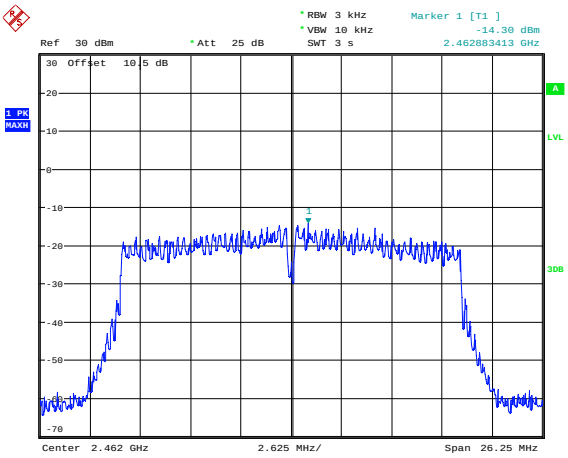

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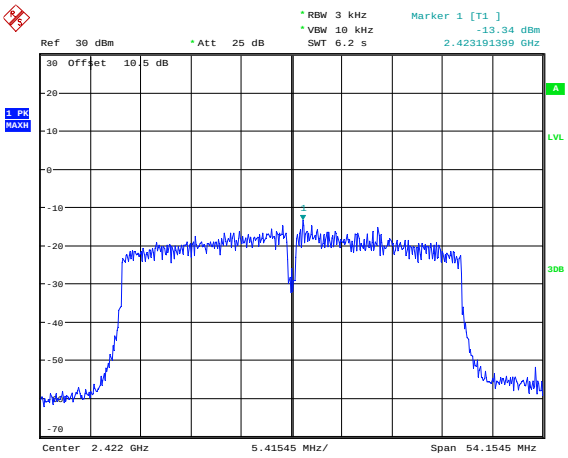
Date: 16.APR.2025 14:57:33

802.11n40_2412MHz



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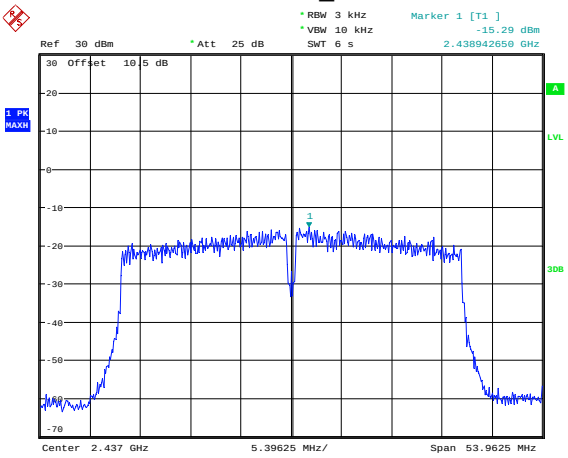
Date: 16.APR.2025 15:01:09

802.11n40_2437MHz



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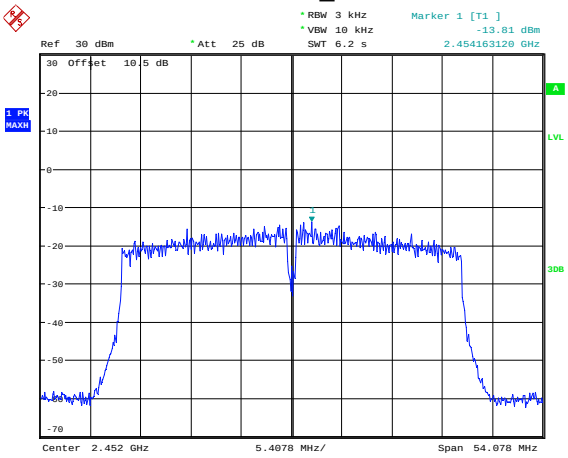
Date: 16.APR.2025 15:03:06

802.11n40_2452MHz



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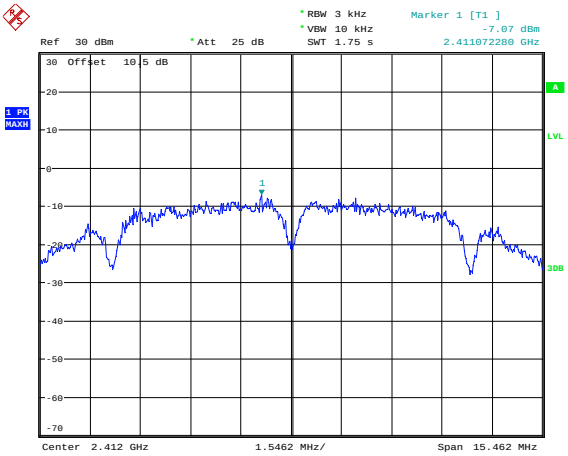
Date: 16.APR.2025 15:05:28

Chain 1:

802.11b_2412MHz



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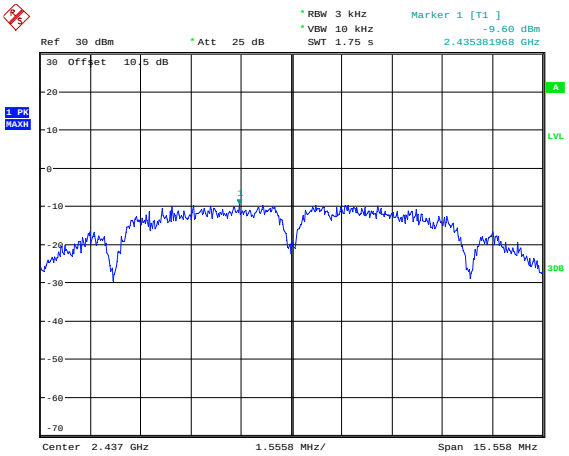
Date: 16.APR.2025 15:19:16

802.11b_2437MHz



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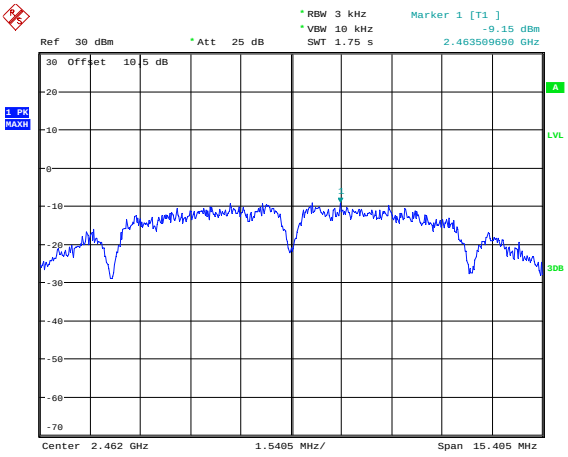
802.11b_2462MHz



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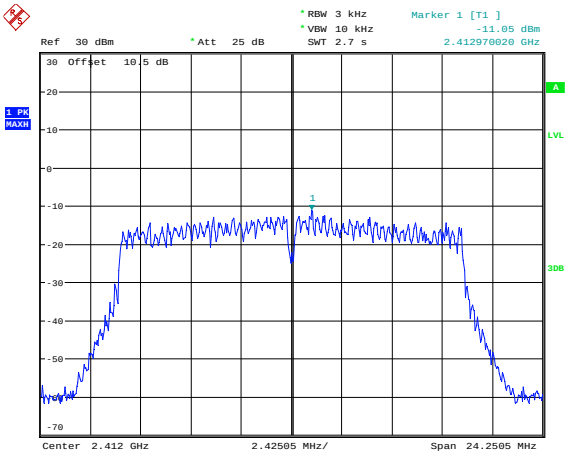
Date: 16.APR.2025 15:21:21

802.11g_2412MHz



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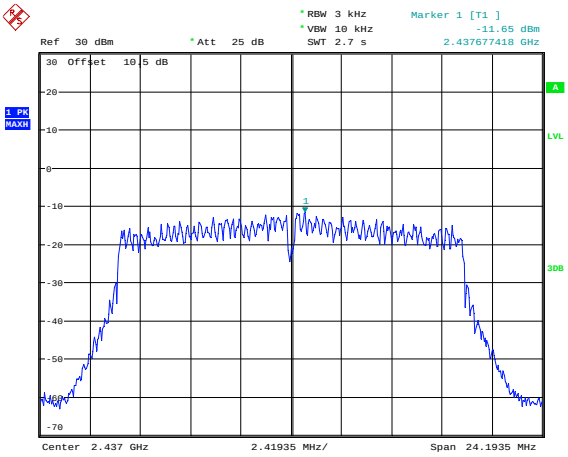
802.11g_2437MHz



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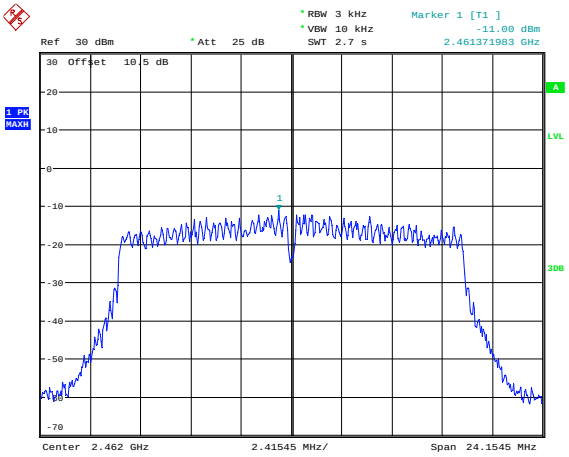
802.11g_2462MHz



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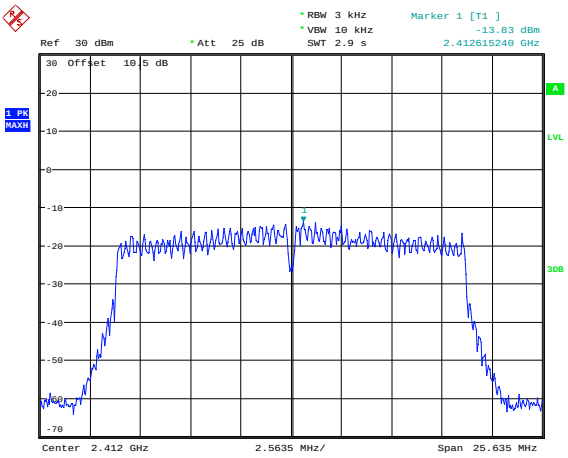
Date: 16.APR.2025 15:25:39

802.11n20_2412MHz



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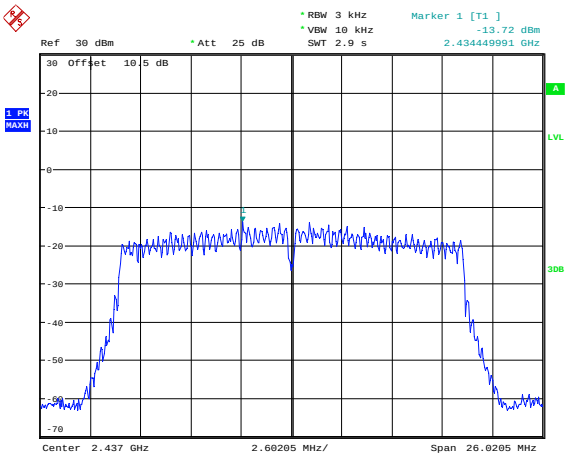
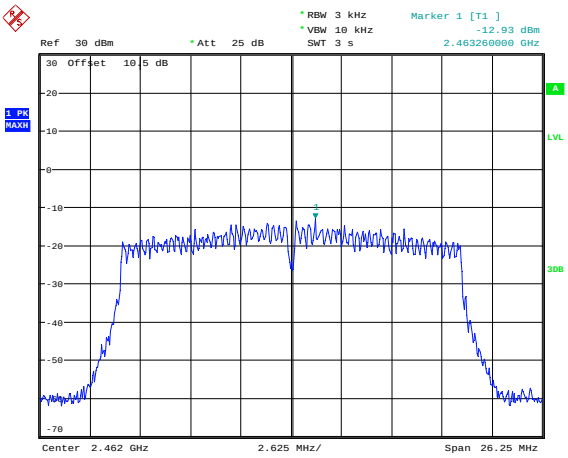
Date: 16.APR.2025 15:27:11

802.11n20_2437MHz



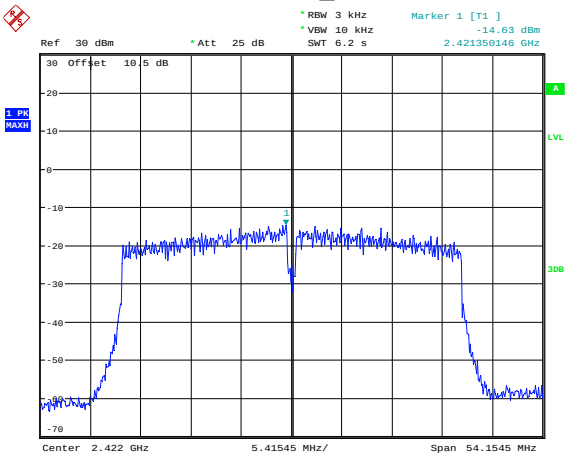
ProjectNo.:2502S52446E-RF Tester:Rini Yan
Date: 16.APR.2025 15:28:20

802.11n20_2462MHz



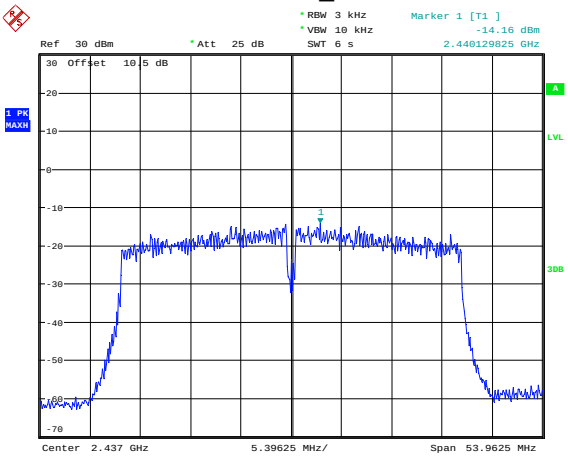
ProjectNo.:2502S52446E-RF Tester:Rini Yan
Date: 16.APR.2025 15:30:18

802.11n40_2412MHz



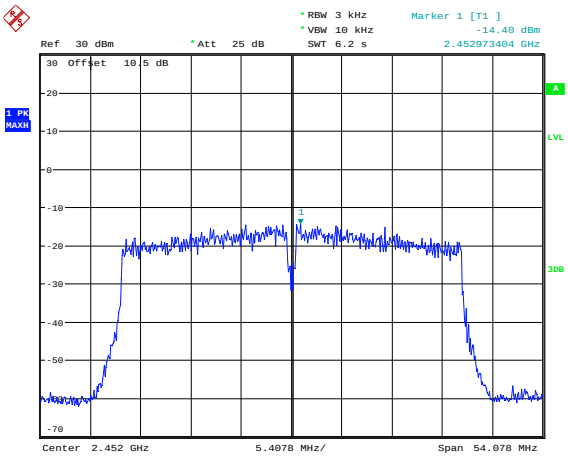
ProjectNo.:2502S52446E-RF Tester:Rini Yan
Date: 16.APR.2025 15:32:28

802.11n40_2437MHz



ProjectNo.:2502S52446E-RF Tester:Rini Yan
Date: 16.APR.2025 15:34:35

802.11n40_2452MHz



ProjectNo.:2502S52446E-RF Tester:Rini Yan
Date: 16.APR.2025 15:36:18

5.7 100 kHz Bandwidth of Frequency Band Edge

Serial Number:	314Y-2	Test Date:	2025-04-16
Test Site:	RF	Test Mode:	Transmitting
Tester:	Rini Yan	Test Result:	Pass

Environmental Conditions:					
Temperature: (℃)	25.9	Relative Humidity: (%)	51	ATM Pressure: (kPa)	101.1

Test Equipment List and Details:

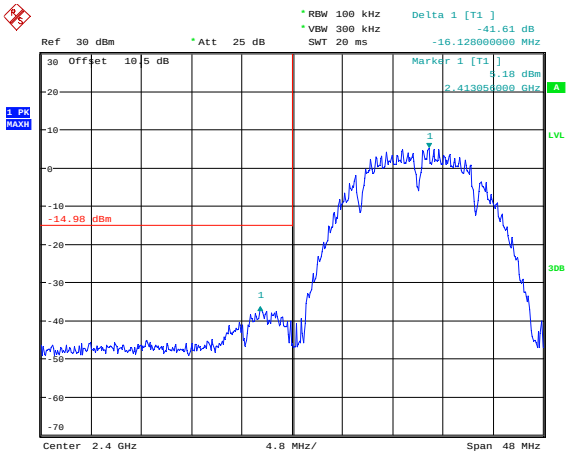
Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Spectrum Analyzer	FSU 26	200445	2025/3/31	2026/3/30
Eastsheep	Coaxial Attenuator	2W-SMA-JK-6G-10dB	F-08-EM510	2024/6/7	2025/6/6

** Statement of Traceability: Bay Area Compliance Laboratories Corp. (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).*

Test Data:

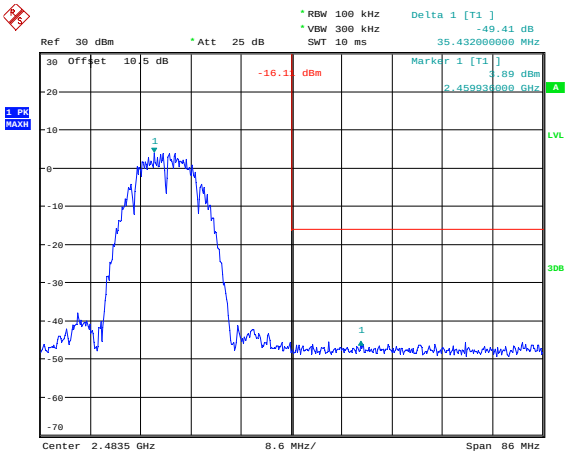
Chain 0:

802.11b_2412MHz



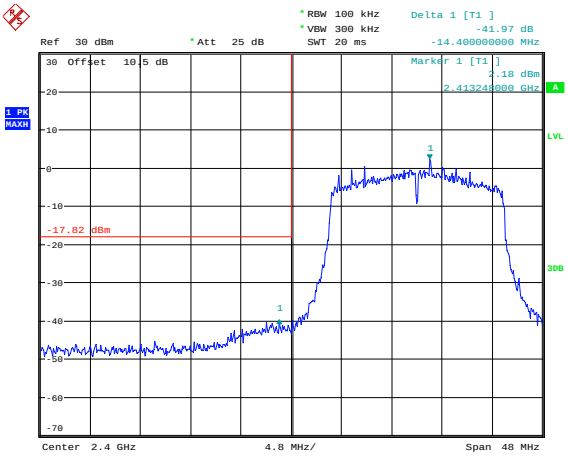
ProjectNo.:2502S52446E-RF Tester:Rini Yan
Date: 16.APR.2025 14:40:33

802.11b_2462MHz



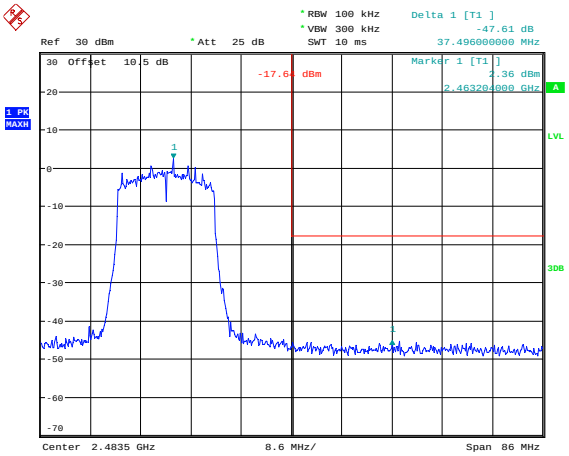
ProjectNo.:2502S52446E-RF Tester:Rini Yan
Date: 16.APR.2025 15:12:12

802.11g_2412MHz



ProjectNo.:2502S52446E-RF Tester:Rini Yan
Date: 16.APR.2025 14:50:45

802.11g_2462MHz



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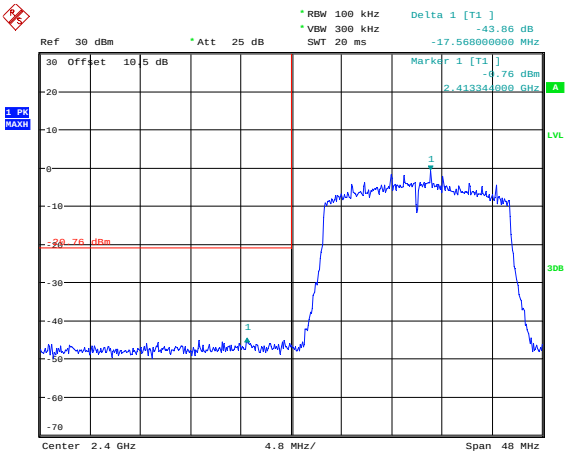
802.11n20_2412MHz



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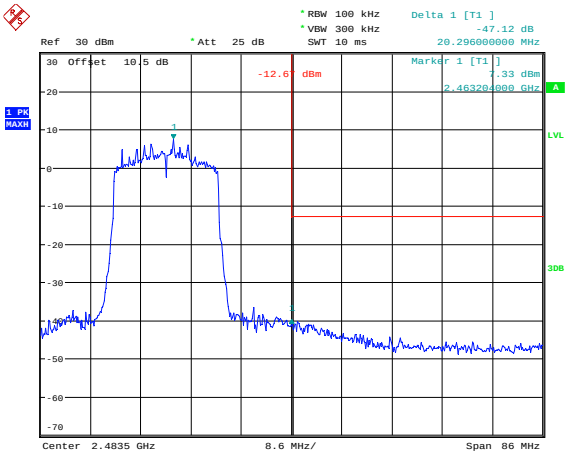
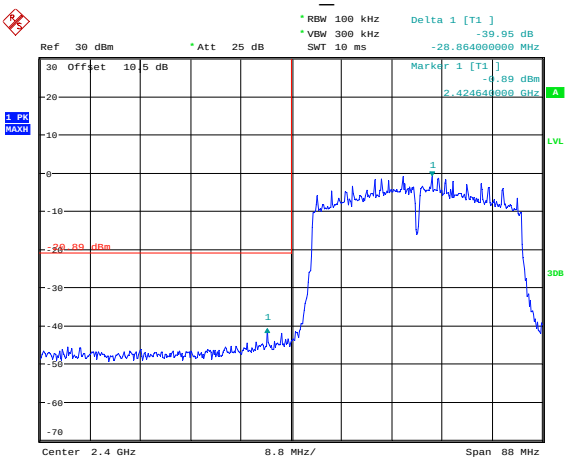
Date: 16.APR.2025 14:55:01

802.11n20_2462MHz



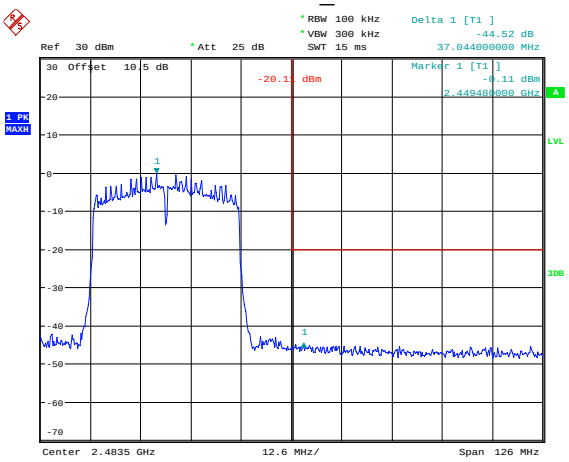
ProjectNo.:2502S52446E-RF Tester:Rini Yan
Date: 16.APR.2025 14:57:24

802.11n40_2412MHz



ProjectNo.:2502S52446E-RF Tester:Rini Yan
Date: 16.APR.2025 15:01:22

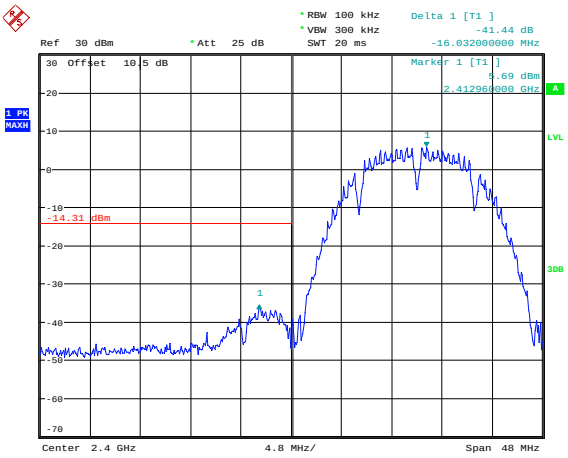
802.11n40_2452MHz



ProjectNo.:2502S52446E-RF Tester:Rini Yan
Date: 16.APR.2025 15:05:44

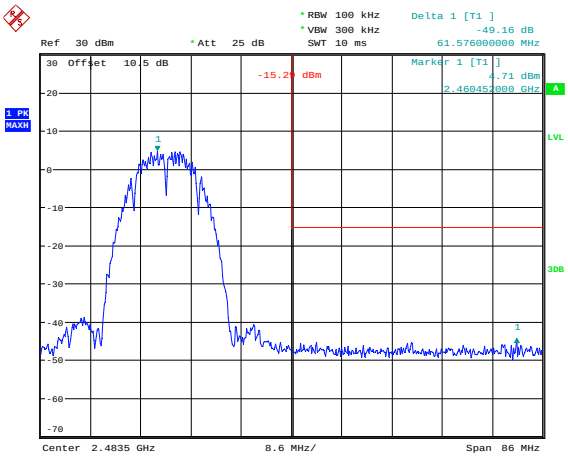
Chain 1:

802.11b_2412MHz



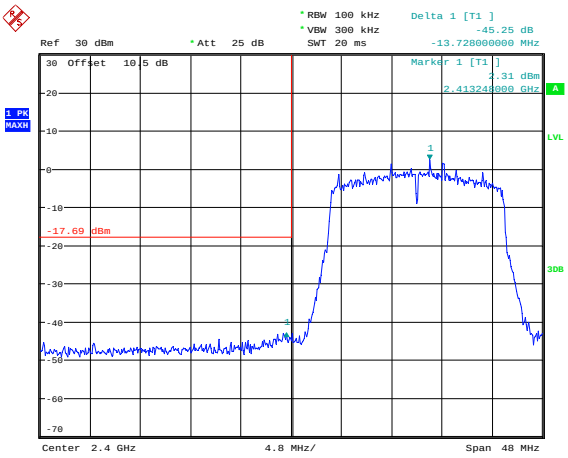
ProjectNo.:2502S52446E-RF Tester:Rini Yan
Date: 16.APR.2025 15:19:29

802.11b_2462MHz



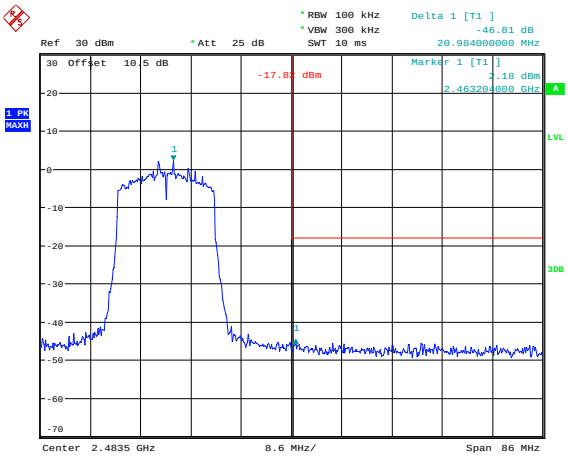
ProjectNo.:2502S52446E-RF Tester:Rini Yan
Date: 16.APR.2025 15:21:34

802.11g_2412MHz



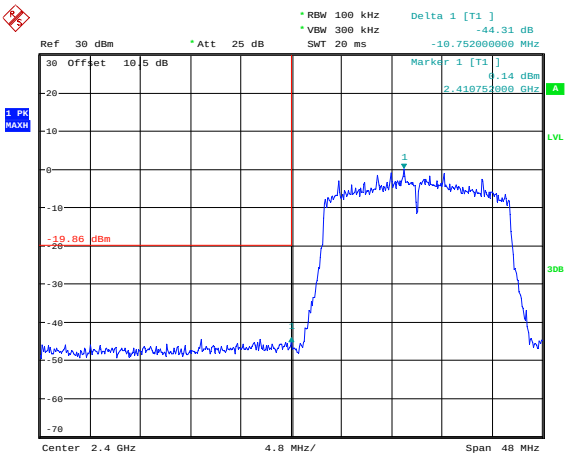
ProjectNo.:2502S52446E-RF Tester:Rini Yan
Date: 16.APR.2025 15:23:05

802.11g_2462MHz



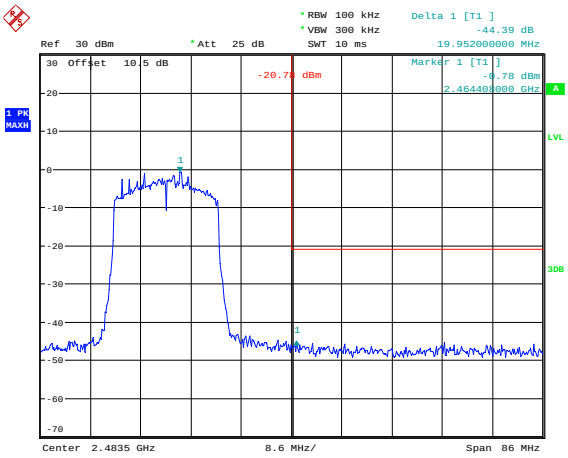
ProjectNo.:2502S52446E-RF Tester:Rini Yan
Date: 16.APR.2025 15:25:52

802.11n20_2412MHz



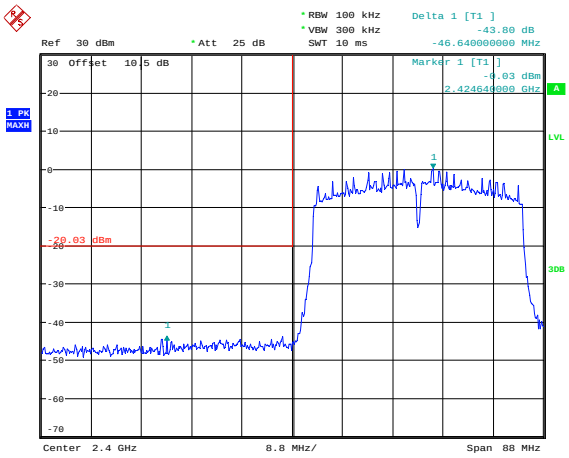
ProjectNo.:2502S52446E-RF Tester:Rini Yan
Date: 16.APR.2025 15:27:24

802.11n20_2462MHz



ProjectNo.:2502S52446E-RF Tester:Rini Yan
Date: 16.APR.2025 15:30:31

802.11n40_2412MHz



ProjectNo.:2502S52446E-RF Tester:Rini Yan
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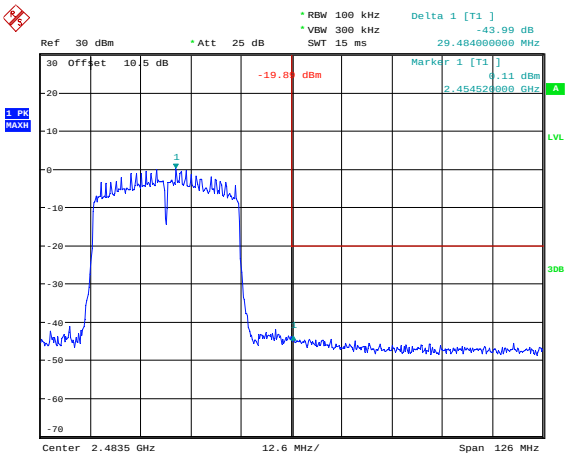
802.11n40_2452MHz



ProjectNo.:2502S52446E-RF Tester:Rini Yan
Date: 16.APR.2025 15:36:34

5.8 Duty Cycle

Serial Number:	314Y-2	Test Date:	2025-04-16
Test Site:	RF	Test Mode:	Transmitting
Tester:	Rini Yan	Test Result:	N/A

Environmental Conditions:					
Temperature: (℃)	25.9	Relative Humidity: (%)	51	ATM Pressure: (kPa)	101.1

Test Equipment List and Details:

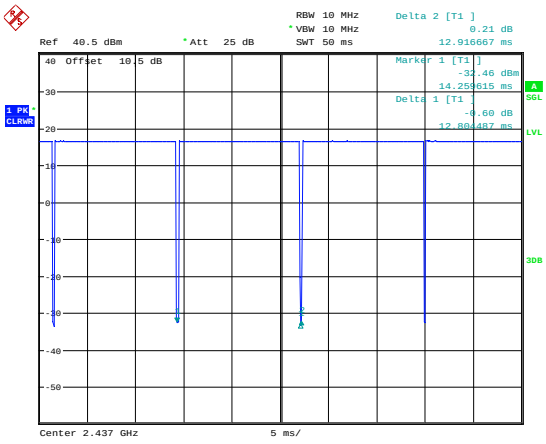
Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Spectrum Analyzer	FSU 26	200445	2025/3/31	2026/3/30
Eastsheep	Coaxial Attenuator	2W-SMA-JK-6G-10dB	F-08-EM510	2024/6/7	2025/6/6

** Statement of Traceability: Bay Area Compliance Laboratories Corp. (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).*

Test Data:

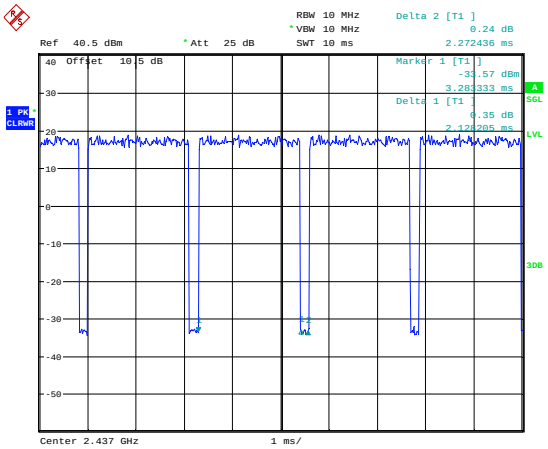
Test Modes	Ton (ms)	Ton+off (ms)	Duty cycle (%)	1/T (Hz)	VBW Setting (kHz)	Duty Factor (dB)
802.11b	12.804	12.917	99.13	78	0.1	/
802.11g	2.128	2.272	93.66	470	0.5	0.28
802.11n ht20	1.952	2.054	95.03	512	1	0.22
802.11n ht40	0.96	1.152	83.33	1042	3	0.79
Note: Test only was performed at Chain 0.						

802.11b_2437MHz



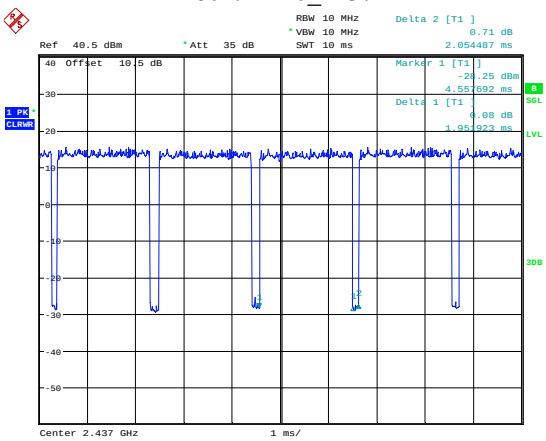
ProjectNo.:2502S52446E-RF Tester:Rini Yan
Date: 16.APR.2025 16:34:52

802.11g_2437MHz



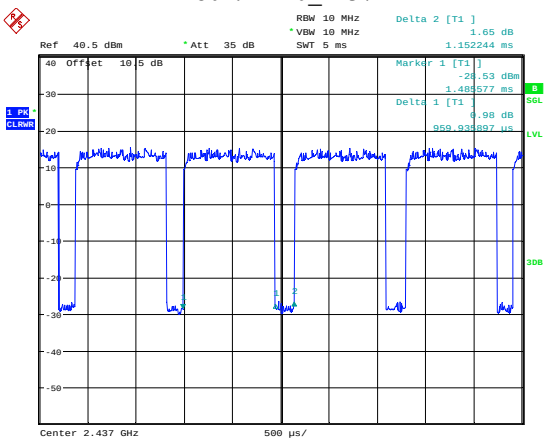
ProjectNo.:2502S52446E-RF Tester:Rini Yan
Date: 16.APR.2025 16:29:45

802.11n20_2437MHz



ProjectNo.:2502S52446E-RF Tester:Rini Yan
Date: 16.APR.2025 13:13:02

802.11n40_2437MHz



ProjectNo.:2502S52446E-RF Tester:Rini Yan
Date: 16.APR.2025 11:59:06

EXHIBIT A - EUT PHOTOGRAPHS

Please refer to the attachment 2502S52446E-RF-EXPEUT EXTERNAL PHOTOGRAPHS and 2502S52446E-RF-INPEUTINTERNAL PHOTOGRAPHS.

EXHIBIT B - TEST SETUP PHOTOGRAPHS

Please refer to the attachment 2502S52446E-RF-00C-TSPTEST SETUP PHOTOGRAPHS.

******* END OF REPORT *******