FCC PART 15, SUBPART C
ISEDC RSS-247, ISSUE 2, FEBRUARY 2017

TEST REPORT

For

MAD APPAREL INC.

201 Arch St., Redwood City, CA 94062, USA

FCC ID: 2ADM9-ATHOS1
IC: 12535A-ATHOS1

Report Type:	**Product Type:**
Original Report	Health Data Recording Device

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Report Number:	R2108033-247
Report Date:	2021-09-09
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ACCREDITED
CERTIFICATE #3297.02

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DOCUMENT REVISION HISTORY

Revision Number	Report Number	Description of Revision	Date of Revision
0	R2108033-247	Original Report	2021-09-09

1 General Description

1.1 Product Description for Equipment Under Test (EUT)

This test report was prepared on behalf of *MAD Apparel Inc. (dba Athos),* and their product, Model: AC20, *FCC ID: 2ADM9-ATHOS1, IC: 12535A-ATHOS1,* or the "EUT" as referred to in this report. The EUT is a Bluetooth Low Energy Wearable Device with NFC operating at 13.56 MHz and Bluetooth Low Energy.

1.2 Mechanical Description of EUT

AC20 measures approximately 6.4 cm (Length) x 3.3 cm (Width) x 1.6 cm (High), and weighs approximately 0.0025kg.

The data gathered are from a typical production sample provided by the manufacturer with serial number: R2108033-1 assigned by BACL.

1.3 Objective

This report was prepared on behalf of *MAD Apparel Inc. (dba Athos)* in accordance with Part 2, Subpart J, and Part 15, Subpart C of the Federal Communication Commission's rules and ISEDC RSS-247 Issue 2, February 2017.

The objective was to determine compliance with FCC Part 15.247 and ISEDC RSS-247 for Antenna Requirement, RF Exposure, AC Line Conducted Emissions, Emission Bandwidth, Radiated & Conducted Spurious Emissions, 100 kHz Band Edges, Maximum Output Power, and Peak Power Spectrum Density

1.4 Related Submittal(s)/Grant(s)

FCC Part 15, Subpart C, Equipment Class: DXX with FCC ID: 2ADM9-ATHOS1, IC: 12535A-ATHOS1

1.5 Test Methodology

All measurements contained in this report were conducted in accordance with ANSI C63.10-2013, American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices.

1.6 Measurement Uncertainty

All measurements involve certain levels of uncertainties, especially in the field of EMC. The factors contributing to uncertainties are spectrum analyzer, cable loss, antenna factor calibration, antenna directivity, antenna factor variation with height, antenna phase center variation, antenna factor frequency interpolation, measurement distance variation, site imperfections, mismatch (average), and system repeatability.

Parameter	Measurement uncertainty
Occupied Channel Bandwidth	±5 %
RF output power, conducted	±0.57 dB
Power Spectral Density, conducted	±1.48dB
Unwanted Emissions, conducted	±1.57dB
All emissions, radiated	±4.0 dB
AC power line Conducted Emission	±2.0 dB
Temperature	±2 º C
Humidity	±5 %
DC and low frequency voltages	±1.0 %
Time	±2 %
Duty Cycle	±3 %

1.7 Test Facility Registrations

BACLs test facilities that are used to perform Radiated and Conducted Emissions tests are currently recognized by the Federal Communications Commission as Accredited with NIST Designation Number US1129.

BACL's test facilities that are used to perform Radiated and Conducted Emissions tests are currently registered with Industry Canada under Registration Numbers: 3062A-1, 3062A-2, and 3062A-3.

BACL is a Chinese Taipei Bureau of Standards Metrology and Inspection (BSMI) validated Conformity Assessment Body (CAB), under Appendix B, Phase I Procedures of the APEC Mutual Recognition Arrangement (MRA). BACL's BSMI Lab Code Number is: SL2-IN-E-1002R

BACL's test facilities that are used to perform AC Line Conducted Emissions, Telecommunications Line Conducted Emissions, Radiated Emissions from 30 MHz to 1 GHz, and Radiated Emissions from 1 GHz to 6 GHz are currently recognized as Accredited in accordance with the Voluntary Control Council for Interference [VCCI] Article 15 procedures under Registration Number A-0027.

1.8 Test Facility Accreditations

Bay Area Compliance Laboratories Corp. (BACL) is:

A- ***An independent, 3rd-Party, Commercial Test Laboratory accredited to ISO/IEC 17025:2005 by A2LA (Test Laboratory Accreditation Certificate Number 3297.02)*****,** in the fields of: Electromagnetic Compatibility and Telecommunications. Unless noted by an Asterisk (*) in the Compliance Matrix (See Section 3 of this Test Report), BACL's ISO/IEC 17025:2005 Scope of Accreditation includes all of the Test Method Standards and/or the Product Family Standards detailed in this Test Report.

BACL's ISO/IEC 17025:2005 Scope of Accreditation includes a comprehensive suite of EMC Emissions, EMC Immunity, Radio, RF Exposure, Safety and wireline Telecommunications test methods applicable to a wide range of product categories. These product categories include Central Office Telecommunications Equipment [including NEBS - Network Equipment Building Systems], Unlicensed and Licensed Wireless and RF devices, Information Technology Equipment (ITE); Telecommunications Terminal Equipment (TTE); Medical Electrical Equipment; Industrial, Scientific and Medical Test Equipment; Professional Audio and Video Equipment; Industrial and Scientific Instruments and Laboratory Apparatus; Cable Distribution Systems, and Energy Efficient Lighting.

B- ***A Product Certification Body accredited to ISO/IEC 17065:2012 by A2LA (Product Certification Body Accreditation Certificate Number 3297.03)*** to certify

- For the USA (Federal Communications Commission):
  - 1- All Unlicensed radio frequency devices within FCC Scopes A1, A2, A3, and A4;
  - 2- All Licensed radio frequency devices within FCC Scopes B1, B2, B3, and B4;
  - 3- All Telephone Terminal Equipment within FCC Scope C.
- For the Canada (Industry Canada):
  - 1 All Scope 1-Licence-Exempt Radio Frequency Devices;
  - 2 All Scope 2-Licensed Personal Mobile Radio Services;
  - 3 All Scope 3-Licensed General Mobile & Fixed Radio Services;
  - 4 All Scope 4-Licensed Maritime & Aviation Radio Services;
  - 5 All Scope 5-Licensed Fixed Microwave Radio Services
  - 6 All Broadcasting Technical Standards (BETS) in the Category I Equipment Standards List.
- For Singapore (Info-Communications Development Authority (IDA)):
  - 1 All Line Terminal Equipment: All Technical Specifications for Line Terminal Equipment – Table 1 of IDA MRA Recognition Scheme: 2011, Annex 2
  - 2. All Radio-Communication Equipment: All Technical Specifications for Radio-Communication Equipment – Table 2 of IDA MRA Recognition Scheme: 2011, Annex 2
- For the Hong Kong Special Administrative Region:
  - 1 All Radio Equipment, per KHCA 10XX-series Specifications;
  - 2 All GMDSS Marine Radio Equipment, per HKCA 12XX-series Specifications;
  - 3 All Fixed Network Equipment, per HKCA 20XX-series Specifications.
- For Japan:
  - 1 MIC Telecommunication Business Law (Terminal Equipment):
    - All Scope A1 - Terminal Equipment for the Purpose of Calls;
    - All Scope A2 - Other Terminal Equipment
  - 2 Radio Law (Radio Equipment):
    - All Scope B1 - Specified Radio Equipment specified in Article 38-2-2, paragraph 1, item 1 of the Radio Law
    - All Scope B2 - Specified Radio Equipment specified in Article 38-2-2, paragraph 1, item 2 of the Radio Law
    - All Scope B3 - Specified Radio Equipment specified in Article 38-2-2, paragraph 1, item 3 of the Radio Law

C- ***A Product Certification Body accredited to ISO/IEC 17065:2012 by A2LA (Product Certification Body Accreditation Certificate Number 3297.01)*** to certify Products to USA's Environmental Protection Agency (EPA) ENERGY STAR Product Specifications for:

1 Electronics and Office Equipment:
- for Telephony (ver. 3.0)
- for Audio/Video (ver. 3.0)

- for Battery Charging Systems (ver. 1.1)
- for Set-top Boxes & Cable Boxes (ver. 4.1)
- for Televisions (ver. 6.1)
- for Computers (ver. 6.0)
- for Displays (ver. 6.0)
- for Imaging Equipment (ver. 2.0)
- for Computer Servers (ver. 2.0)

2 Commercial Food Service Equipment
- for Commercial Dishwashers (ver. 2.0)
- for Commercial Ice Machines (ver. 2.0)
- for Commercial Ovens (ver. 2.1)
- for Commercial Refrigerators and Freezers

3 Lighting Products
- For Decorative Light Strings (ver. 1.5)
- For Luminaires (including sub-components) and Lamps (ver. 1.2)
- For Compact Fluorescent Lamps (CFLs) (ver. 4.3)
- For Integral LED Lamps (ver. 1.4)

4 Heating, Ventilation, and AC Products
- for Residential Ceiling Fans (ver. 3.0)
- for Residential Ventilating Fans (ver. 3.2)

5 Other
- For Water Coolers (ver. 3.0)

D- ***A NIST Designated Phase-I and Phase-II Conformity Assessment Body (CAB) for the following economies and regulatory authorities under the terms of the stated MRAs/Treaties:***

- Australia: ACMA (Australian Communication and Media Authority) – APEC Tel MRA -Phase I;
- Canada: (Innovation, Science and Economic development Canada - ISEDC) Foreign Certification Body – FCB – APEC Tel MRA -Phase I & Phase II;
- Chinese Taipei (Republic of China – Taiwan):
  - BSMI (Bureau of Standards, Metrology and Inspection) APEC Tel MRA -Phase I;
  - NCC (National Communications Commission) APEC Tel MRA -Phase I;
- European Union:
  - EMC Directive 2014/30/EU US-EU EMC & Telecom MRA CAB (NB)
  - Radio Equipment (RE) Directive 2014/53/EU US-EU EMC & Telecom MRA CAB (NB)
  - Low Voltage Directive (LVD) 2014/35/EU
- Hong Kong Special Administrative Region: (Office of the Telecommunications Authority – OFTA) APEC Tel MRA -Phase I & Phase II
- Israel – US-Israel MRA Phase I
- Republic of Korea (Ministry of Communications - Radio Research Laboratory) APEC Tel MRA -Phase I
- Singapore: (Infocomm Media Development Authority - IMDA) APEC Tel MRA -Phase I & Phase II;
- Japan: VCCI - Voluntary Control Council for Interference US-Japan Telecom Treaty VCCI Side Letter-
- USA:
  - ENERGY STAR Recognized Test Laboratory – US EPA
  - Telecommunications Certification Body (TCB) – US FCC;
  - Nationally Recognized Test Laboratory (NRTL) – US OSHA
- Vietnam: APEC Tel MRA -Phase I;

2 System Test Configuration

2.1 Justification

The EUT was configured for testing in accordance to ANSI C63.10.

2.2 EUT Exercise Software

The test software used was *TeraTerm* and verified to comply with the standard requirements being tested against.

Data Rate	Channel Frequency (MHz)	Power Setting
1Mb/s	2402	+4 dBm
	2440	+4 dBm
	2480	+4 dBm
2Mb/s	2402	+4 dBm
	2440	+4 dBm
	2480	+4 dBm

2.3 Duty Cycle Correction Factor

According to KDB 558074 D01 DTS Meas Guidance v05r02 section 6.0:

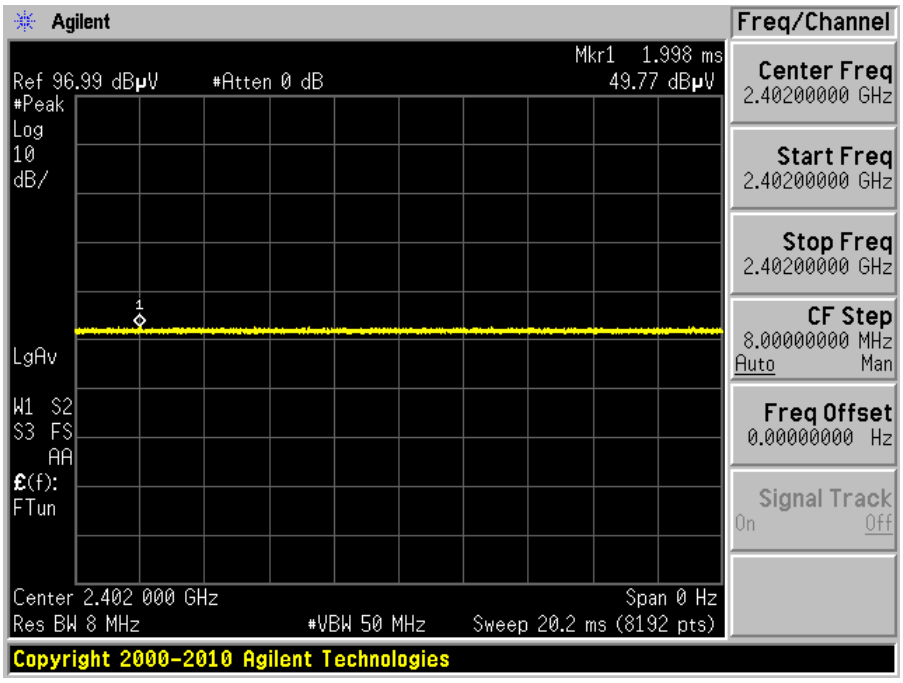
Preferably, all measurements of maximum conducted (average) output power will be performed with the EUT transmitting continuously (i.e., with a duty cycle of greater than or equal to 98%). When continuous operation cannot be realized, then the use of sweep triggering/signal gating techniques can be utilized to ensure that measurements are made only during transmissions at the maximum power control level. Such sweep triggering/signal gating techniques will require knowledge of the minimum transmission duration (T) over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation. Sweep triggering/signal gating techniques can then be used if the measurement/sweep time of the analyzer can be set such that it does not exceed T at any time that data is being acquired (i.e., no transmitter off-time is to be considered).

Data Rate (Mb/s)	Radio frequency (MHz)	On Time (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)
1	2402	20.2	20.2	100	0
2	2402	20.2	20.2	100	0

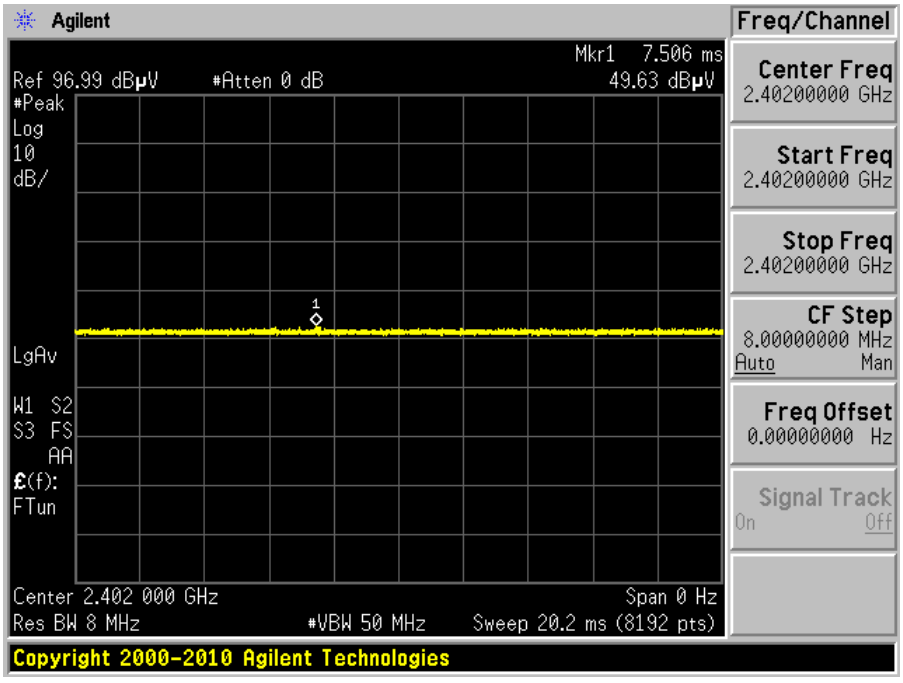
Duty Cycle = On Time (ms)/ Period (ms)
Duty Cycle Correction Factor (dB) = 10*log(1/Duty Cycle)

Please refer to the following plots.

1 Mb/s, 2402 MHz



2 Mb/s, 2402 MHz



2.4 Equipment Modifications

N/A

2.5 Local Support Equipment

Manufacturer	Description	Model No.	Serial No.
Dell	Laptop	Latitude E6410	3CKRAQ1

2.6 Remote Support Equipment

Manufacturer	Description	Model
Athos	Charger (Debug Board)	-
Athos	NFC tag	-

2.7 Interface Ports and Cabling

Cable Descriptions	Length (m)	From	To
USB Type A to Micro USB Type B	1.0	EUT Charger	Laptop

3 Summary of Test Results

Results reported relate only to the product tested.

FCC & ISEDC Rules	Description of Test	Results
FCC §15.203 ISEDC RSS-Gen §6.8	Antenna Requirements	Compliant
FCC §2.1093, §15.247(i) ISEDC RSS-102	RF Exposure	Compliant
FCC §15.207 ISEDC RSS-Gen §8.8	AC Line Conducted Emissions	Compliant
FCC §15.209, §15.247(d) ISEDC RSS-247 §5.5 RSS-Gen §8.9, §8.10	Radiated Spurious Emissions	Compliant
FCC §15.247(a)(2) ISEDC RSS-247 §5.2 RSS-Gen §6.7	6 dB & 99% Emission Bandwidth	Compliant
FCC §15.247(b)(3) ISEDC RSS-247 §5.4	Maximum Output Power	Compliant
FCC §15.247(e) ISEDC RSS-247 §5.2(2)	Peak Power Spectral Density	Compliant
FCC §15.247(d) ISEDC RSS-247 §5.5	100 kHz Bandwidth of Frequency Band Edge	Compliant
FCC §2.1051, §15.247 (d) ISEDC RSS-247 §5.5	Spurious Emissions at Antenna Port	Compliant

4 FCC §15.203 & ISEDC RSS-Gen §6.8 - Antenna Requirements

4.1 Applicable Standards

According to 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.

And according to FCC §15.247 (b) (4), if transmitting antennas of directional gain greater than 6 dBi are used the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

According to ISEDC RSS-Gen §6.8: Transmitter Antenna

The applicant for equipment certification shall provide a list of all antenna types that may be used with the transmitter, where applicable (i.e. for transmitters with detachable antenna), indicating the maximum permissible antenna gain (in dBi) and the required impedance for each antenna. The test report shall demonstrate the compliance of the transmitter with the limit for maximum equivalent isotropically radiated power (e.i.r.p.) specified in the applicable RSS, when the transmitter is equipped with any antenna type, selected from this list.

For expediting the testing, measurements may be performed using only the antenna with highest gain of each combination of transmitter and antenna type, with the transmitter output power set at the maximum level. However, the transmitter shall comply with the applicable requirements under all operational conditions and when in combination with any type of antenna from the list provided in the test report (and in the notice to be included in the user manual, provided below).

When measurements at the antenna port are used to determine the RF output power, the effective gain of the device's antenna shall be stated, based on a measurement or on data from the antenna's manufacturer.

The test report shall state the RF power, output power setting and spurious emission measurements with each antenna type that is used with the transmitter being tested.

For license-exempt equipment with detachable antennas, the user manual shall also contain the following notice in a conspicuous location:

This radio transmitter has been approved by Innovation, Science and Economic Development Canada to operate with the antenna types listed below, with the maximum permissible gain indicated. Antenna types not included in this list that have a gain greater than the maximum gain indicated for any type listed are strictly prohibited for use with this device.

Immediately following the above notice, the manufacturer shall provide a list of all antenna types which can be used with the transmitter, indicating the maximum permissible antenna gain (in dBi) and the required impedance for each antenna type.

4.2 Antenna Description

External/Internal/ Integral	Frequency Range (MHz)	Antenna Type
Integral	2400-2483.5 MHz	PCB Patch

Antenna gain is information provided by customer.

5 FCC §2.1093, §15.247(i) & ISEDC RSS-102 - RF Exposure

5.1 Applicable Standards

According to FCC KDB 447498 D01 General RF Exposure Guidance v06 Section 4.3.1, Unless specifically required by the published RF exposure KDB procedures, standalone 1-g head or body and 10-g extremity SAR evaluation for general population exposure conditions, by measurement or numerical simulation, is not required when the corresponding SAR Test Exclusion Threshold condition, listed below, is satisfied. These test exclusion conditions are based on source-based time-averaged maximum conducted output power of the RF channel requiring evaluation, adjusted for tune-up tolerance, and the minimum test separation distance required for the exposure conditions. The minimum test separation distance is determined by the smallest distance from the antenna and radiating structures or outer surface of the device, according to the host form factor, exposure conditions and platform requirements, to any part of the body or extremity of a user or bystander (see 5) of section 4.1). To qualify for SAR test exclusion, the test separation distances applied must be fully explained and justified by the operating configurations and exposure conditions of the transmitter and applicable host platform requirements, typically in the SAR measurement or SAR analysis report, according to the required published RF exposure KDB procedures. When no other RF exposure testing or reporting is required, a statement of justification and compliance must be included in the equipment approval, in lieu of the SAR report, to qualify for the SAR test exclusion. When required, the device specific conditions described in the other published RF exposure KDB procedures must be satisfied before applying these SAR test exclusion provisions; for example, handheld PTT two-way radios, handsets, laptops & tablets etc.

1) The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:
   [(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)] · [√f(GHz)] ≤ 3.0 for 1-g SAR and ≤ 7.5 for 10-g extremity SAR, where

   • f(GHz) is the RF channel transmit frequency in GHz
   • Power and distance are rounded to the nearest mW and mm before calculation
   • The result is rounded to one decimal place for comparison
   • 3.0 and 7.5 are referred to as the numeric thresholds in the step 2 below

   The test exclusions are applicable only when the minimum test separation distance is ≤ 50 mm and for transmission frequencies between 100 MHz and 6 GHz. When the minimum test separation distance is < 5 mm, a distance of 5 mm according to 5) in section 4.1 is applied to determine SAR test exclusion.

2) At 100 MHz to 6 GHz and for test separation distances > 50 mm, the SAR test exclusion threshold is determined according to the following, and as illustrated in Appendix B:

   a) [Power allowed at numeric threshold for 50 mm in step 1) + (test separation distance - 50 mm)·(f(MHz)/150)] mW, at 100 MHz to 1500 MHz
   b) [Power allowed at numeric threshold for 50 mm in step 1) + (test separation distance - 50 mm)·10] mW at > 1500 MHz and ≤ 6 GHz

3) At frequencies below 100 MHz, the following may be considered for SAR test exclusion, and as illustrated in Appendix C:

   a) The power threshold at the corresponding test separation distance at 100 MHz in step 2) is multiplied by [1 + log(100/f(MHz))] for test separation distances > 50 mm and < 200 mm
   b) The power threshold determined by the equation in a) for 50 mm and 100 MHz is multiplied by ½ for test separation distances ≤ 50 mm

   c) SAR measurement procedures are not established below 100 MHz. When SAR test exclusion cannot be applied, a KDB inquiry is required to determine SAR evaluation requirements for any test results to be acceptable.

According to 4.3.2. Simultaneous transmission SAR test exclusion considerations Simultaneous transmission SAR test exclusion is determined for each operating configuration and exposure condition according to the reported standalone SAR of each applicable simultaneously transmitting antenna. When the sum of 1-g or 10-g SAR of all simultaneously transmitting antennas in an operating mode and exposure condition combination is within the SAR limit, SAR test exclusion applies to that simultaneous transmission configuration. When the sum is greater than the SAR limit, the SAR to peak location separation ratio procedures described below may be applied to determine if simultaneous transmission SAR test exclusion applies. For the test exclusion to apply, the maximum output power, duty factor, and other applicable parameters used in the standalone SAR tests, must be the same or more conservative than those required for simultaneous transmission. When the maximum output power used for standalone operations is reduced in an operating mode or exposure condition during simultaneous transmission, often due to SAR or other implementation requirements, the standalone SAR tested at the higher output power may be applied to determine simultaneous transmission SAR test exclusion. Alternatively, additional standalone SAR at the reduced maximum output power applied for simultaneous transmission may be performed to determine simultaneous transmission SAR test exclusion, according to the sum of 1-g SAR or SAR to peak location separation ratio procedures. The power level of the standalone SAR used to qualify for SAR test exclusion must be clearly explained in the SAR report. When simultaneous transmission SAR test exclusion does not apply, enlarged zoom scan measurements must be performed at the maximum output power required in the power reduction modes for simultaneous transmission, within the tune-up tolerance requirements of all transmitters, for applying the volume scan post-processing procedures.

a) The transmitters and antennas in a device are typically not designed to transmit simultaneously and concurrently across multiple exposure conditions, such as head, body-worn accessories and other next to the body use conditions. The wireless modes and frequency bands supporting simultaneous transmission may also vary for the different exposure conditions. In addition, some exposure conditions may require multiple test positions, such as touch and tilt on the left and right side of the head, or different edges of tablets and phones. As a result, these conditions require simultaneous transmission to be evaluated according to the combinations of wireless modes and frequency bands configured to transmit simultaneously in each applicable exposure condition. In some cases, the different test positions in an exposure condition may be considered collectively to determine SAR test exclusion according to the sum of 1-g or 10-g SAR; for example, if the sum of the highest reported SAR of each antenna for the touch and tilt positions on both sides of the head does not exceed the limit. When the sum of SAR considered in this manner does not qualify for test exclusion, the individual test positions of each exposure condition should be considered separately for the sum of 1-g or 10-g SAR test exclusion. For each simultaneous transmission configuration that does not satisfy the sum of SAR test exclusion, SAR to peak location separation ratio should be evaluated to qualify for SAR test exclusion. In all cases, the reported standalone SAR should be applied to determine simultaneous transmission SAR test exclusion. b) When an antenna qualifies for the standalone SAR test exclusion of 4.3.1 and also transmits simultaneously with other antennas, the standalone SAR value must be estimated according to the following to determine the simultaneous transmission SAR test exclusion criteria

b) When an antenna qualifies for the standalone SAR test exclusion of 4.3.1 and also transmits simultaneously with other antennas, the standalone SAR value must be estimated according to the following to determine the simultaneous transmission SAR test exclusion criteria:

    1) [(max. power of channel, including tune-up tolerance, mW) / (min. test separation distance, mm)]·[√f(GHz)/x] W/kg, for test separation distances ≤ 50 mm; where x = 7.5 for 1-g SAR and x = 18.75 for 10-g SAR.
    2) 0.4 W/kg for 1-g SAR and 1.0 W/kg for 10-g SAR, when the test separation distance is > 50 mm.37

This SAR estimation formula has been considered in conjunction with the SAR Test Exclusion Thresholds to result in substantially conservative SAR values of ≤ 0.4 W/kg. When SAR is estimated, the peak SAR location is assumed to be at the feed-point or geometric center of the antenna, whichever provides a smaller antenna separation distance, and this location must be clearly identified in test reports. The estimated SAR is used only to determine simultaneous transmission SAR test exclusion; it should not be reported as the standalone SAR. When SAR is estimated, it must be applied to determine the sum of 1-g SAR test exclusion. When SAR to peak location separation ratio test exclusion is applied, the highest reported SAR for simultaneous transmission can be an estimated standalone SAR if the estimated SAR is the highest among the simultaneously transmitting antennas (see also KDB Publication 690783 D01). For situations where the estimated SAR is overly conservative for certain conditions, the test lab may choose to perform standalone SAR measurements, then use

the measured SAR to determine simultaneous transmission SAR test exclusion. Estimated SAR values at selected frequencies, distances, and power levels are illustrated in Appendix D

According to ISED RSS-102 Issue 5 Section 2.5.1 Exemption Limits for Routine Evaluation-SAR Evaluation:

SAR evaluation is required if the separation distance between the user and/or bystander and the antenna and/or radiating element of the device is less than or equal to 20 cm, except when the device operates at or below the applicable output power level (adjusted for tune-up tolerance) for the specified separation distance defined in table below,

Frequency (MHz)	Exemption Limits (mW)				
	At separation distance of ≤5 mm	At separation distance of 10 mm	At separation distance of 15 mm	At separation distance of 20 mm	At separation distance of 25 mm
≤300	71	101	132	162	193
450	52	70	88	106	123
835	17	30	42	55	67
1900	7	10	18	34	60
2450	4	7	15	30	52
3500	2	6	16	32	55
5800	1	6	15	27	41

Frequency (MHz)	Exemption Limits (mW)				
	At separation distance of 30 mm	At separation distance of 35 mm	At separation distance of 40 mm	At separation distance of 45 mm	At separation distance of ≥50 mm
≤300	223	254	284	315	345
450	141	159	177	195	213
835	80	92	105	117	130
1900	99	153	225	316	431
2450	83	123	173	235	309
3500	86	124	170	225	290
5800	56	71	85	97	106

5.2 RF Exposure Evaluation Exemption for FCC

The maximum conducted turn-up power measured from the EUT is 4 dBm (2.5 mW). Therefore, the maximum

[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)] [√f(GHz)] = (2.5 mW/5mm)* √2.402 = 0.775, which is less than 3.0. Therefore, FCC SAR testing is excluded.

According to 4.3.2 The estimate SAR value for BT5 is [(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)] [√f(GHz)/x] W/kg, = (2.5 mW/ 5mm) * (√2.402/7.5) = 0.103 W/kg.

According to the Report No. R2108033-225, the Estimate SAR value for NFC is almost 0 W/kg.

The total estimate simultaneously SAR value will be 0.103 W/kg which is lower than the SAR limit 1.6 W/kg. Therefore, the FCC SAR testing for simultaneously transmission is exempt.

5.3 RF Exposure Evaluation Exemption for IC

The maximum Peak EIRP was 1.44 dBm, and turn-up conducted power = 4 dBm (2.5 mW), which is less than 4 mW. Therefore, IC SAR testing is not required.

Note: The maximum Peak EIRP was calculated based on the peak field strength 106.14 dBuV/m measured at 1 meter distance.
According to C63.10 Section 9.5: EIRP = EMeas + 20log (dMeas) −104.7.

where
EIRP is the equivalent isotropically radiated power, in dBm
EMeas is the field strength of the emission at the measurement distance, in dBμV/m
dMeas is the measurement distance, in m

6 FCC §15.207 & ISEDC RSS-Gen §8.8 - AC Line Conducted Emissions

6.1 Applicable Standards

As per FCC §15.207 and IC RSS-Gen §8.8 Conducted limits:

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 frequencies ranges.

Frequency of Emission (MHz)	Conducted Limit (dBuV)	
	Quasi-Peak	Average
0.15-0.5	66 to 56 Note1	56 to 46 Note2
0.5-5	56	46
5-30	60	50

Note1: Decreases with the logarithm of the frequency.
Note2: A linear average detector is required

6.2 Test Setup

The measurement was performed at shield room, using the setup per ANSI C63.10-2013 measurement procedure. The specification used were FCC §15.207 and IC RSS-Gen §8.8 limits.

External I/O cables were draped along the edge of the test table and bundle when necessary.

The AC/DC power adapter of the EUT was connected with LISN-1 which provided 120 V / 60 Hz AC power.

6.3 Test Procedure

During the conducted emissions test, the EUT module was connected to a dc power supply that is connected to the mains outlet of the LISN-1 and the power cords of support equipment were connected to LISN-2.

Maximizing procedure was performed on the six (6) highest emissions of the EUT.

All data were recorded in the peak, quasi-peak, and average detection mode. Quasi-Peak readings are distinguished with a “QP.” Average readings are distinguished with an “Ave”.

6.4 Corrected Amplitude & Margin Calculation

The Corrected Amplitude (CA) is calculated by adding the Correction Factor (CF) to indicated Amplitude (Ai) reading. The basic equation is as follows:

$$CA = Ai + CF$$

For example, a corrected amplitude of 46.2 dBuV = Indicated Reading (32.5 dBuV) + Correction Factor (13.7 dB)

The Correction Factor is calculated by adding Cable loss (CL), LISN calibration factor, and attenuation of the impulse limiter and the high pass filter. The basic equation is as follows:

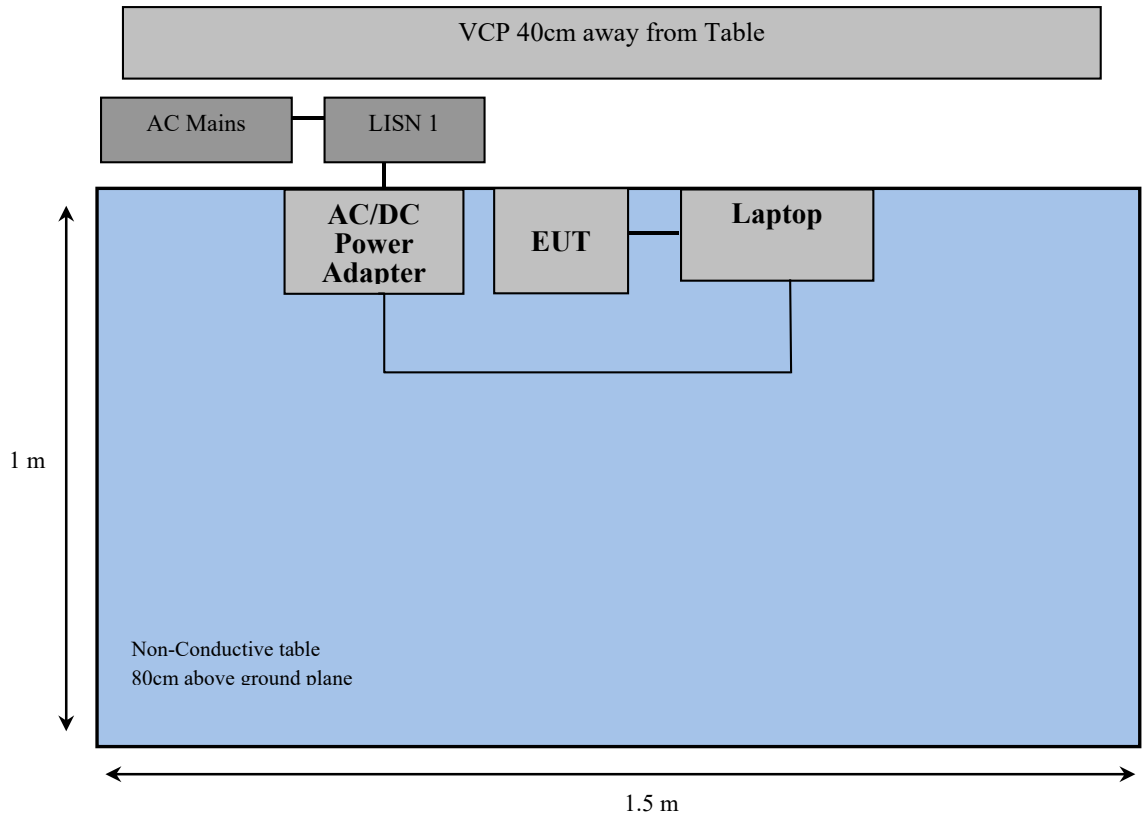
$$CF = CL + LISN\ calibration\ factor + Attenuation$$

For example, a corrected amplitude of 46.2 dBuV = Indicated Reading (32.5 dBuV) + Cable Loss (3.5 dB) + LISN calibration factor (0.2 dB) + Attenuator (10 dB)

The "**Margin**" column of the following data tables indicates the degree of compliance within the applicable limit. For example, a margin of -7 dB means the emission is 7 dB below the maximum limit. The equation for margin calculation is as follows:

$$Margin = Corrected\ Amplitude - Limit$$

6.5 Test Setup Block Diagram



6.6 Test Equipment List and Details

Manufacturer	Description	Model No.	Serial No.	Calibration Date	Calibration Interval
Rohde & Schwarz	Receiver, EMI Test	ESCI 1166.5950.03	100338	2020-03-17	18 months
Rohde & Schwarz	Impulse Limiter	ESH3-Z2	101964	2021-07-07	1 year
Solar Electronics Company	High Pass Filter	Type 7930-100	7930150203	2021-03-02	1 year
FCC	LISN	FCC-LISN-50-25-2-10-CISPR16	160129	2020-10-12	1 year
Fairview Microwave	Micro-Coax Cable	FMC0101223-240	1907181	2021-09-08	1 year
California Instruments	AC Power Source	5001ix-208	57079	Calibration not Required	Calibration not Required

Statement of Traceability: BACL Corp. *attests that all of the calibrations on the equipment items listed above were traceable to NIST or to another internationally recognized National Metrology Institute (NMI), and were compliant with A2LA Policy P102 "A2LA Policy on Metrological Traceability".*

6.7 Test Environmental Conditions

Temperature:	23º C
Relative Humidity:	44 %
ATM Pressure:	102.1 kPa

The testing was performed by Zhao Zhao on 2021-09-08 at ground plane area.

6.8 Summary of Test Results

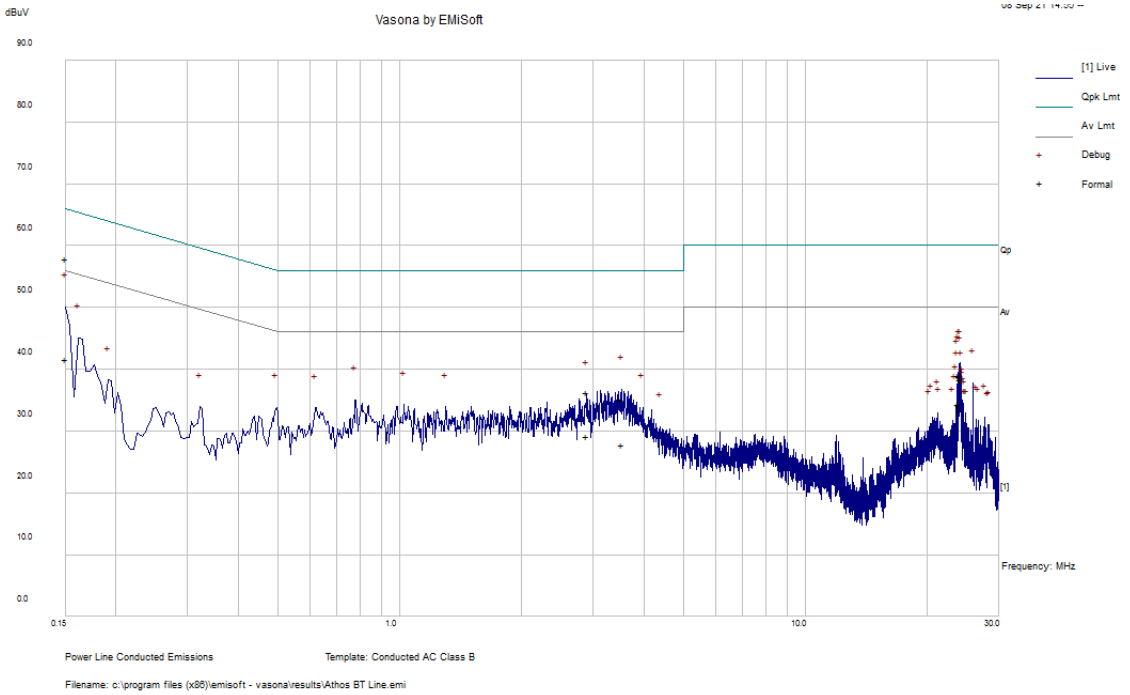
According to the recorded data in following table, the EUT complied with the FCC 15C and IC RSS-Gen standard's conducted emissions limits, with the margin reading of:

Connection: EUT was connected to DC Power adapter. The DC Source was connected to 120 V/60 Hz, AC			
Margin (dB)	**Frequency (MHz)**	**Conductor Mode (Line/Neutral)**	**Range (MHz)**
-8.15	0.150275	Line	0.15-30

6.9 Conducted Emissions Test Plots and Data

BT5 1Mb/s power setting +4 dBm

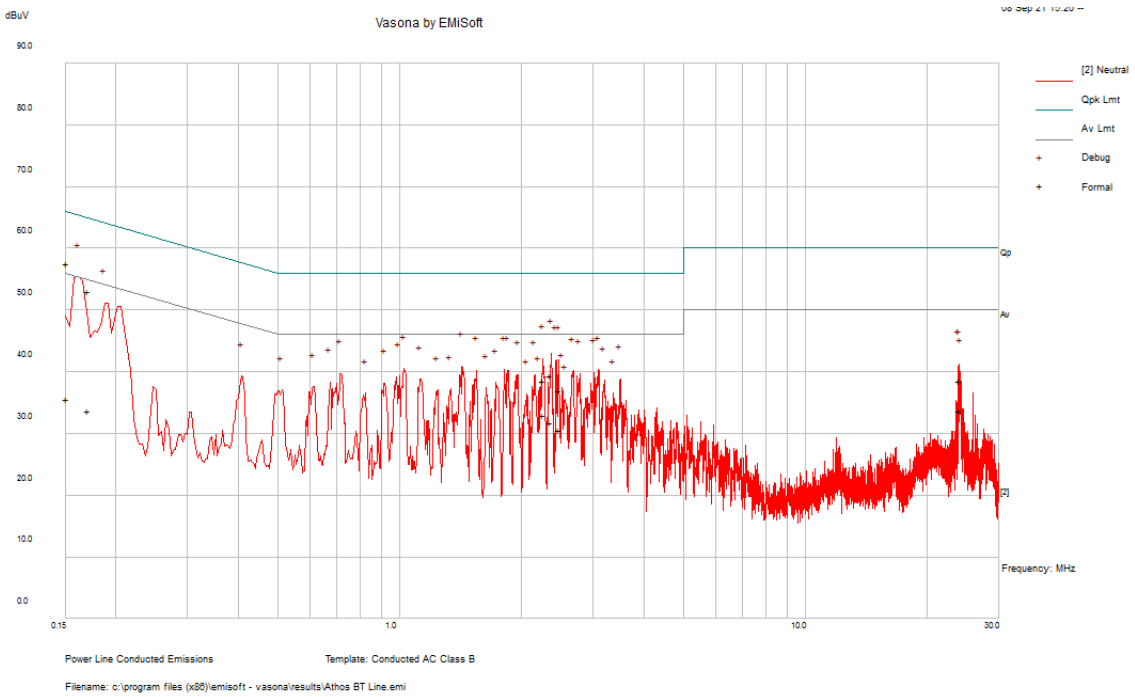
120 V, 60 Hz – Line



Frequency (MHz)	S.A. Reading (dBuV)	Correction Factor (dB)	Corrected Amplitude (dBuV)	Conductor (Line/ Neutral)	Limit (dBuV)	Margin (dB)	Detector (QP/Ave.)
0.150275	47.06	10.77	57.84	Line	65.98	-8.15	QP
24.05294	27.11	11.28	38.39	Line	60	-21.61	QP
23.94654	27.64	11.28	38.92	Line	60	-21.08	QP
3.541084	24.74	10.28	35.03	Line	56	-20.97	QP
23.84407	27.81	11.27	39.08	Line	60	-20.92	QP
2.894082	26.05	10.26	36.31	Line	56	-19.69	QP

Frequency (MHz)	S.A. Reading (dBuV)	Correction Factor (dB)	Corrected Amplitude (dBuV)	Conductor (Line/ Neutral)	Limit (dBuV)	Margin (dB)	Detector (QP/Ave.)
0.150275	30.88	10.77	41.66	Line	55.98	-14.33	Ave
24.05294	22.01	11.28	33.29	Line	50	-16.71	Ave
23.94654	22.85	11.28	34.13	Line	50	-15.87	Ave
3.541084	17.5	10.28	27.78	Line	46	-18.22	Ave
23.84407	23.13	11.27	34.4	Line	50	-15.6	Ave
2.894082	18.91	10.26	29.17	Line	46	-16.83	Ave

120 V, 60 Hz – Neutral



Frequency (MHz)	S.A. Reading (dBuV)	Correction Factor (dB)	Corrected Amplitude (dBuV)	Conductor (Line/ Neutral)	Limit (dBuV)	Margin (dB)	Detector (QP/Ave.)
0.151367	46.72	10.77	57.49	Neutral	65.92	-8.44	QP
2.360697	29.13	10.23	39.36	Neutral	56	-16.64	QP
0.170827	42.32	10.74	53.07	Neutral	64.92	-11.85	QP
2.257986	28.24	10.23	38.47	Neutral	56	-17.53	QP
2.46515	26.67	10.24	36.91	Neutral	56	-19.09	QP
23.95937	27.24	11.28	38.51	Neutral	60	-21.49	QP

Frequency (MHz)	S.A. Reading (dBuV)	Correction Factor (dB)	Corrected Amplitude (dBuV)	Conductor (Line/ Neutral)	Limit (dBuV)	Margin (dB)	Detector (QP/Ave.)
0.151367	24.86	10.77	35.63	Neutral	55.92	-20.3	Ave
2.360697	21.63	10.23	31.86	Neutral	46	-14.14	Aver
0.170827	22.99	10.74	33.73	Neutral	54.92	-21.19	Ave
2.257986	22.79	10.23	33.02	Neutral	46	-12.98	Aver
2.46515	20.35	10.24	30.58	Neutral	46	-15.42	Ave
23.95937	22.44	11.28	33.71	Neutral	50	-16.29	Ave

7 FCC §15.209, §15.247(d) & ISEDC RSS-247 §5.5, RSS-Gen §8.9, §8.10 - Spurious Radiated Emissions

7.1 Applicable Standards

As per FCC §15.35(d): Unless otherwise specified, on any frequency or frequencies above 1000 MHz, the radiated emission limits are based on the use of measurement instrumentation employing an average detector function. Unless otherwise specified, measurements above 1000 MHz shall be performed using a minimum resolution bandwidth of 1 MHz.

As Per FCC §15.205(a) and RSS-Gen except as show in paragraph (d) of this section, only spurious emissions are permitted in any of the frequency bands listed below:

MHz	MHz	MHz	GHz
0.090 – 0.110	16.42 – 16.423	960 – 1240	4. 5 – 5. 15
0.495 – 0.505	16.69475 – 16.69525	1300 – 1427	5. 35 – 5. 46
2.1735 – 2.1905	25.5 – 25.67	1435 – 1626.5	7.25 – 7.75
4.125 – 4.128	37.5 – 38.25	1645.5 – 1646.5	8.025 – 8.5
4.17725 – 4.17775	73 – 74.6	1660 – 1710	9.0 – 9.2
4.20725 – 4.20775	74.8 – 75.2	1718.8 – 1722.2	9.3 – 9.5
6.215 – 6.218	108 – 121.94	2200 – 2300	10.6 – 12.7
6.26775 – 6.26825	123 – 138	2310 – 2390	13.25 – 13.4
6.31175 – 6.31225	149.9 – 150.05	2483.5 – 2500	14.47 – 14.5
8.291 – 8.294	156.52475 – 156.52525	2690 – 2900	15.35 – 16.2
8.362 – 8.366	156.7 – 156.9	3260 – 3267	17.7 – 21.4
8.37625 – 8.38675	162.0125 –167.17	3.332 – 3.339	22.01 – 23.12
8.41425 – 8.41475	167.72 – 173.2	3 3458 – 3 358	23.6 – 24.0
12.29 – 12.293	240 – 285	3.600 – 4.400	31.2 – 31.8
12.51975 – 12.52025	322 – 335.4		36.43 – 36.5
12.57675 – 12.57725	399.9 – 410		Above 38.6
13.36 – 13.41	608 – 614		

As per FCC §15.209(a): Except as provided elsewhere in this Subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

Frequency (MHz)	Field Strength (micro volts/meter)	Measurement Distance (meters)
0.009 - 0.490	2400/F(kHz)	300
0.490 - 1.705	24000/F(kHz)	30
1.705 - 30.0	30	30
30 - 88	100**	3
88 - 216	150**	3
216 - 960	200**	3
Above 960	500	3

** Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this Section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this Part, e.g., Sections 15.231 and 15.241.

As per 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).

As per ISEDC RSS-Gen 8.9,

Except when the requirements applicable to a given device state otherwise, emission from licence-exempt transmitters shall company with the field strength limits shown in the table below. Additional, the level of any transmitter emission shall not exceed the level of the transmitter's fundamental emission.

General Field Strength Limits for Licence-Exemption Transmitters at Frequencies above 30 MHz

Frequency (MHz)	Field Strength (µv/m at 3 meters)
30-88	100
88-216	150
216-960	200
Above 960*	500

* Unless otherwise specified, for all frequencies greater than 1 GHz, the radiated emission limits for licence-exempt radio apparatus stated in applicable RSSs (including RSS-Gen) are based on measurements using a linear average detector function having a minimum resolution bandwidth of 1 MHz. If an average limit is specified for the EUT, then the peak emission shall also be measured with instrumentation properly adjusted for such factors as pulse desensitization to ensure the peak emission is less than 20 dB above the average limit.

Note: Transmitting devices are not permitted in restricted frequency bands unless stated otherwise in the specific RSS.

As per ISEDC RSS-247 §5.5, in any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated device is operating, the RF power that is produced 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 that the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of root-mean-square averaging over a time interval, as permitted under Section 5.4(4), the attenuation required shall be 30 dB instead of 20 dB. Attenuation below the general field strength limits specified in RSS-Gen is not required.

7.2 Test Setup

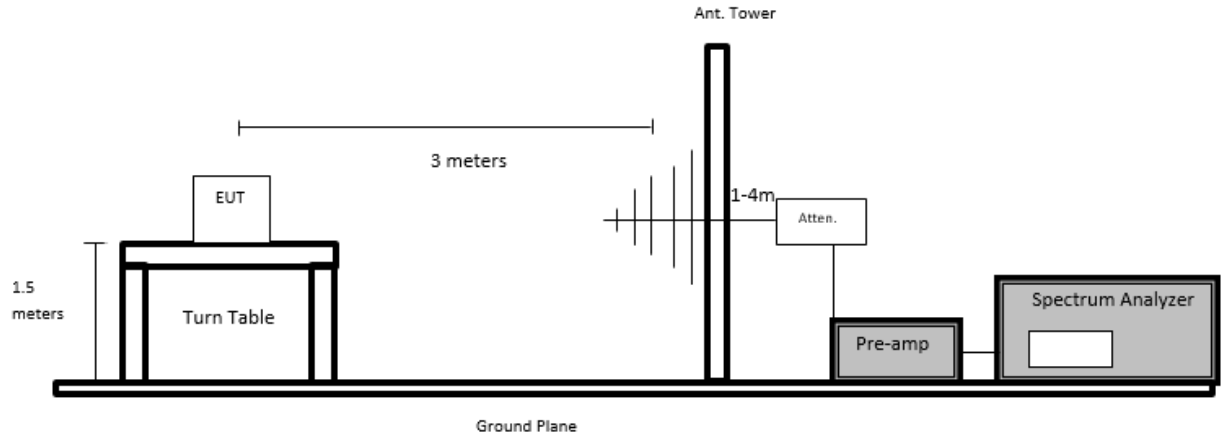
The radiated emissions tests were performed in the 5-meter Chamber, using the setup in accordance with ANSI C63.10-2013. The specification used was the FCC 15 Subpart C and ISEDC RSS-247 limits.

The spacing between the peripherals was 10 centimeters.

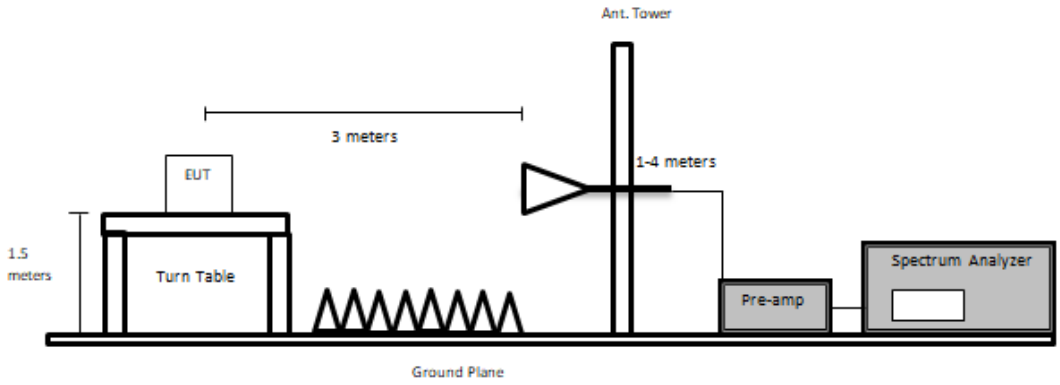
External I/O cables were draped along the edge of the test table and bundle when necessary.

Test Setup Diagram:

30 MHz to 1 GHz



1 GHz and above



7.3 Test Procedure

For the radiated emissions test, the EUT host, and all support equipment power cords was connected to the AC floor outlet.

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

The EUT was set 3 meter away from the testing antenna, which was varied from 1-4 meter, and the EUT was placed on a turntable, which was 0.8 meter and 1.5 meter above the ground plane for below and above 1000 MHz measurements, the table shall be rotated for 360 degrees to find out the highest emission. The receiving antenna should be changed the polarization both of horizontal and vertical.

The spectrum analyzer or receiver is set as:

Below 1000 MHz:

RBW = 100 kHz / VBW = 300 kHz / Sweep = Auto

Above 1000 MHz:

(1) Peak: RBW = 1MHz / VBW = 1MHz / Sweep = Auto
(2) Average: RBW = 1MHz / VBW = 10Hz / Sweep = Auto

7.4 Corrected Amplitude & Margin Calculation

For emissions below 1 GHz,

The Corrected Amplitude (CA) is calculated by adding the Correction Factor to the S.A. Reading. The basic equation is as follows:

CA = S.A. Reading + Correction Factor

For example, a corrected amplitude of 40.3 dBuV/m = S.A. Reading (32.5 dBuV) + Correction Factor (7.8 dB/m)

The Correction Factor is calculated by adding the Antenna Factor (AF), the Cable Loss (CL), the Attenuator Factor (Atten) and subtracting the Amplifier Gain (Ga) together. This calculation is done in the measurement software, and reported in the test result section. The basic equation is as follows:

Correction Factor = AF + CL + Atten – Ga

The "**Margin**" column of the following data tables indicates the degree of compliance within the applicable limit. For example, a margin of -7 dB means the emission is 7 dB below the maximum limit. The equation for margin calculation is as follows:

Margin = Corrected Amplitude – Limit

For emission above 1 GHz,

The Corrected Amplitude (CA) is calculated by adding the Antenna Factor (AF), the Cable Loss (CL), the Attenuator Factor (Atten) and subtracting the Amplifier Gain (Ga) to indicated Amplitude (Ai) reading. The basic equation is as follows:

CA = Ai + AF + CL + Atten – Ga

For example, a corrected amplitude of 40.3 dBuV/m = Indicated Reading (32.5 dBuV) + Antenna Factor (+23.5dB) + Cable Loss (3.7 dB) + Attenuator (10 dB) - Amplifier Gain (29.4 dB)
The "**Margin**" column of the following data tables indicates the degree of compliance within the applicable limit. For example, a margin of -7 dB means the emission is 7 dB below the maximum limit. The equation for margin calculation is as follows:

Margin = Corrected Amplitude – Limit

7.5 Test Equipment List and Details

Manufacturer	Description	Model No.	Serial No.	Calibration Date	Calibration Interval
Rohde and Schwarz	Receiver, EMI Test	ESCI 1166.5950.03	100338	2020-03-17	18 months
Agilent	Analyzer, Spectrum	E4446A	MY48250238	2021-02-12	1 year
Sunol Sciences	System Controller	SC99V	011003-1	N/R	N/A
Sunol Sciences	Antenna, Biconi-Log	JB3	A020106-2	2019-11-20	2 years
ETS Lindgren	Horn Antenna	3117	00218973	2019-02-13	3 years
Wisewave	Antenna, Horn	ARH-4223-02	10555-02	2021-04-12	2 years
Agilent	Amplifier, Pre	8447D	2443A04374	2020-08-17	13 months
HP	Pre-Amplifier	8449B	3008A01978	2021-05-05	1 year
AH Systems	Preamplifier	PAM 1840 VH	170	2021-08-03	1 year
IW Incorporated	157 Series 2.92 SM (x2) Armored 33 ft. Cable	KPS-1571AN-3960-KPS	DC 1917	2021-03-03	1 year
Keysight Technologies	RF Limiter	11867A	MY42242932	2021-03-03	1 year
MDP Digital	Times Microwave LMR 400 UltraFex Coaxial Cable 35'	LMR400UF	BACL1904161	2021-06-18	1 year
-	SMA cable	-	C00011	Each time[1]	N/A
-	Band Reject Filter	-	-	Each time[1]	N/A
Vasona	Test software	V6.0 build 11	10400213	N/R	N/R

Note[1]: cable and notch filter included in the test set-up will be checked each time before testing.
Statement of Traceability: BACL Corp. *attests that all of the calibrations on the equipment items listed above were traceable to NIST or to another internationally recognized National Metrology Institute (NMI), and were compliant with the latest version of A2LA policy P102 "A2LA Policy on Metrological Traceability".*

7.6 Test Environmental Conditions

Temperature:	22 ºC
Relative Humidity:	43 %
ATM Pressure:	102.2 kPa

The testing was performed by Giriraj Gurjar from 2021-08-19 to 2021-08-20 at 5meter chamber 3.

7.7 Summary of Test Results

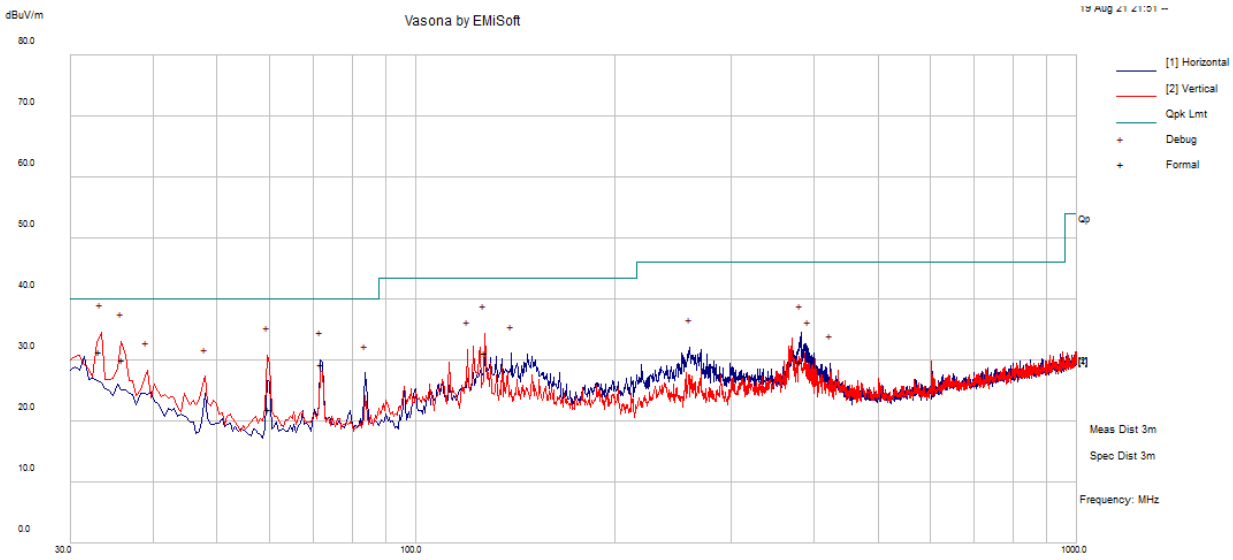
According to the data hereinafter, the EUT complied with FCC Part 15C and ISEDC RSS-247 standard's radiated emissions limits, and had the worst margin of:

Mode: Transmitting			
Margin (dB)	**Frequency (MHz)**	**Polarization (Horizontal/Vertical)**	**Transmitting Channel (MHz)**
-6.02	17967.59	Horizontal	2402

7.8 Radiated Emissions Test Results

1) 30 MHz – 1 GHz Worst Case, Measured at 3 meters

Worst Case Configuration: 2402 MHz 2Mb/s



Frequency (MHz)	S.A. Reading (dBuV)	Correction Factor (dB/m)	Corrected Amplitude (dBµV/m)	Antenna Height (cm)	Antenna Polarity (H/V)	Turntable Azimuth (degrees)	Limit (dBµV/m)	Margin (dB)	Comment
33.2645	31.39	-0.07	31.32	167	V	145	40	-8.68	Pass
35.92825	32.15	-2.06	30.09	118	V	68	40	-9.91	Pass
71.93	39.55	-10.3	29.25	286	H	185	40	-10.75	Pass
127.2408	35.38	-4.19	31.19	118	V	110	43.5	-12.31	Pass
382.3783	32.49	-2.85	29.64	174	H	147	46	-16.36	Pass
59.8315	33.04	-11.16	21.88	122	V	104	40	-18.12	Pass

2) 1–26.5 GHz, Measured at 1 Meter

Frequency (MHz)	S.A. Reading (dBµV)	Turntable Azimuth (degrees)	Test Antenna			Cable Loss (dB)	Pre-Amp. (dB)	Cord. Reading (dBµV/m)	FCC/ISEDC		Note
			Height (cm)	Polarity (H/V)	Factor (dB/m)				Limit (dBµV/m)	Margin (dB)	
Low Channel Frequency: 1Mb/s, 2402 MHz, Pow 4											
2402	61.90	3	154	V	32.60	4.91	0.00	99.41	-	-	Peak
2402	61.21	3	154	V	32.60	4.91	0.00	98.72	-	-	Ave
2402	**68.63**	**325**	**135**	**H**	**32.60**	**4.91**	**0.00**	**106.14**	**-**	**-**	**Peak**
2402	67.85	325	135	H	32.60	4.91	0.00	105.36	-	-	Ave
2390	26.71	0	150	V	32.60	4.91	0.00	64.22	84	-19.78	Peak
2390	16.95	0	150	V	32.60	4.91	0.00	54.46	64	-9.54	Ave
2390	25.87	0	150	H	32.60	4.91	0.00	63.38	84	-20.62	Peak
2390	16.55	0	150	H	32.60	4.91	0.00	54.06	64	-9.94	Ave
1136	54.64	99	150	V	28.30	4.45	38.03	49.36	84	-34.64	Peak
1136	37.71	99	150	V	28.30	4.45	38.03	32.43	64	-31.57	Ave
1613	54.34	85	150	H	28.60	5.07	37.58	50.43	84	-33.57	Peak
1613	36.44	85	150	H	28.60	5.07	37.58	32.53	64	-31.47	Ave
4803	46.20	0	150	V	35.00	10.24	35.07	56.37	84	-27.63	Peak
4803	34.50	0	150	V	35.00	10.24	35.07	44.67	64	-19.33	Ave
4803	46.03	0	150	H	35.00	10.24	35.07	56.20	84	-27.80	Peak
4803	34.32	0	150	H	35.00	10.24	35.07	44.49	64	-19.51	Ave
7196	45.06	123	148	V	36.10	12.94	36.38	57.72	84	-26.28	Peak
7196	32.91	123	148	V	36.10	12.94	36.38	45.57	64	-18.43	Ave
7211	45.58	2	150	H	36.10	12.94	36.38	58.24	84	-25.76	Peak
7211	33.04	2	150	H	36.10	12.94	36.38	45.70	64	-18.30	Ave
Middle Channel Frequency: 1Mb/s, 2440 MHz, Pow 4											
2440	60.74	6	150	V	32.80	4.91	0.00	98.45	-	-	Peak
2440	58.97	6	150	V	32.80	4.91	0.00	96.68	-	-	Ave
2440	66.46	312	155	H	32.80	4.91	0.00	104.17	-	-	Peak
2440	64.80	312	155	H	32.80	4.91	0.00	102.51	-	-	Ave
1596	52.90	157	150	V	28.60	5.07	37.58	48.99	84	-35.01	Peak
1596	37.96	157	150	V	28.60	5.07	37.58	34.05	64	-29.95	Ave
1579	51.94	108	125	H	28.60	5.07	37.58	48.03	84	-35.97	Peak
1579	36.89	108	125	H	28.60	5.07	37.58	32.98	64	-31.02	Ave
4880	46.66	0	150	V	35.30	10.24	35.70	56.50	84	-27.50	Peak
4880	36.86	0	150	V	35.30	10.24	35.70	46.70	64	-17.30	Ave
4879	47.25	95	150	H	35.30	10.24	35.70	57.09	84	-26.91	Peak
4879	37.47	95	150	H	35.30	10.24	35.70	47.31	64	-16.69	Ave
7319	44.44	0	150	V	36.10	13.23	36.48	57.29	84	-26.71	Peak
7319	32.00	0	150	V	36.10	13.23	36.48	44.85	64	-19.15	Ave
7316	44.20	55	150	H	36.10	13.23	36.48	57.05	84	-26.95	Peak
7316	32.57	55	150	H	36.10	13.23	36.48	45.42	64	-18.58	Ave

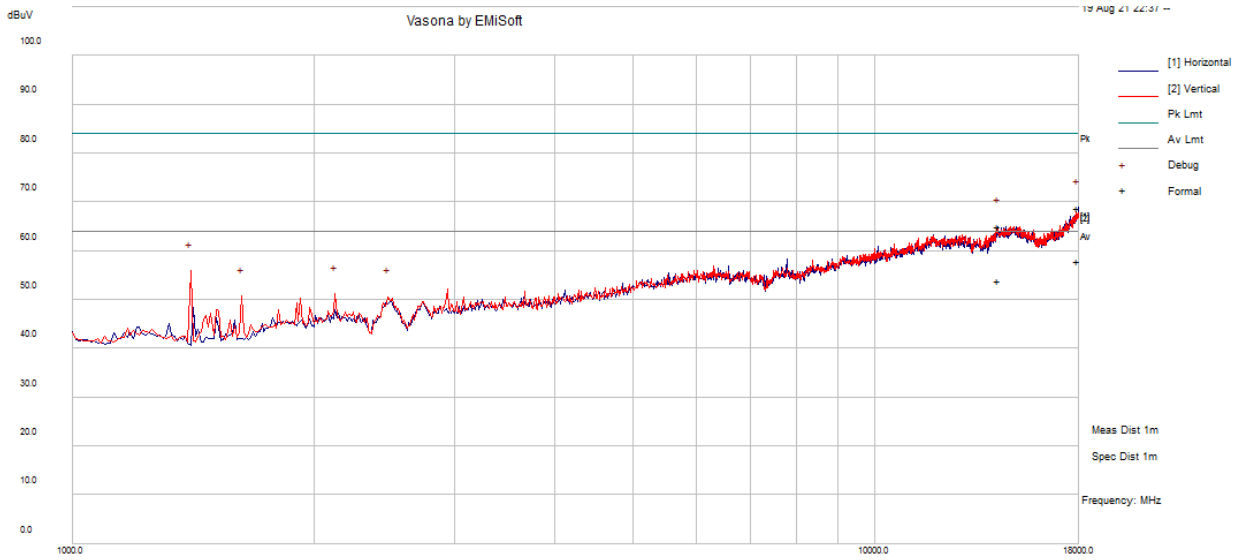
Frequency (MHz)	S.A. Reading (dBµV)	Turntable Azimuth (degrees)	Test Antenna			Cable Loss (dB)	Pre-Amp. (dB)	Cord. Reading (dBµV/m)	FCC/ISEDC		Note
			Height (cm)	Polarity (H/V)	Factor (dB/m)				Limit (dBµV/m)	Margin (dB)	
High Channel Frequency: 1Mb/s, 2480 MHz, Pow 4											
2480	60.74	6	133	V	33.00	4.91	0.00	98.65	-	-	Peak
2480	59.53	6	133	V	33.00	4.91	0.00	97.44	-	-	Ave
2480	66.07	310	150	H	33.00	4.91	0.00	103.98	-	-	Peak
2480	64.85	310	150	H	33.00	4.91	0.00	102.76	-	-	Ave
2483.5	26.64	0	150	V	33.00	4.91	0.00	64.55	84	-19.45	Peak
2483.5	16.93	0	150	V	33.00	4.91	0.00	54.84	64	-9.16	Ave
2483.5	26.59	0	150	H	33.00	4.91	0.00	64.50	84	-19.50	Peak
2483.5	17.58	0	150	H	33.00	4.91	0.00	55.49	64	-8.51	Ave
1596	55.47	163	150	V	28.60	5.07	37.58	51.56	84	-32.44	Peak
1596	37.91	163	150	V	28.60	5.07	37.58	34.00	64	-30.00	Ave
1596	54.36	114	142	H	28.60	5.07	37.58	50.45	84	-33.55	Peak
1596	39.18	114	142	H	28.60	5.07	37.58	35.27	64	-28.73	Ave
4959	47.05	0	184	V	35.40	10.24	35.70	56.99	84	-27.01	Peak
4959	38.58	0	184	V	35.40	10.24	35.70	48.52	64	-15.48	Ave
4959	46.66	0	150	H	35.40	10.24	35.70	56.60	84	-27.40	Peak
4959	37.12	0	150	H	35.40	10.24	35.70	47.06	64	-16.94	Ave
7443	44.99	118	150	V	36.10	13.23	36.48	57.84	84	-26.16	Peak
7443	33.29	118	150	V	36.10	13.23	36.48	46.14	64	-17.86	Ave
7438	45.94	0	150	H	36.10	13.23	36.48	58.79	84	-25.21	Peak
7438	32.84	0	150	H	36.10	13.23	36.48	45.69	64	-18.31	Ave

Frequency (MHz)	S.A. Reading (dBµV)	Turntable Azimuth (degrees)	Test Antenna			Cable Loss (dB)	Pre-Amp. (dB)	Cord. Reading (dBµV/m)	FCC/ISEDC		Note
			Height (cm)	Polarity (H/V)	Factor (dB/m)				Limit (dBµV/m)	Margin (dB)	
Low Channel Frequency: 2Mb/s, 2402 MHz, Pow 4											
2402	61.89	3	154	V	32.60	4.91	0.00	99.40	-	-	Peak
2402	59.39	3	154	V	32.60	4.91	0.00	96.90	-	-	Ave
2402	68.48	325	135	H	32.60	4.91	0.00	105.99	-	-	Peak
2402	65.23	325	135	H	32.60	4.91	0.00	102.74		-	Ave
2390	27.03	0	150	V	32.60	4.91	0.00	64.54	84	-19.46	Peak
2390	16.06	0	150	V	32.60	4.91	0.00	53.57	64	-10.43	Ave
2390	26.87	0	150	H	32.60	4.91	0.00	64.38	84	-19.62	Peak
2390	16.56	0	150	H	32.60	4.91	0.00	54.07	64	-9.93	Ave
1596	52.38	131	150	V	28.60	5.07	37.58	48.47	84	-35.53	Peak
1596	38.84	131	150	V	28.60	5.07	37.58	34.93	64	-29.07	Ave
1596	51.59	115	150	H	28.60	5.07	37.58	47.68	84	-36.32	Peak
1596	39.03	115	150	H	28.60	5.07	37.58	35.12	64	-28.88	Ave
4804	46.96	0	150	V	35.00	10.24	35.70	56.50	84	-27.50	Peak
4804	35.70	0	150	V	35.00	10.24	35.70	45.24	64	-18.76	Ave
4804	46.98	102	125	H	35.00	10.24	35.70	56.52	84	-27.48	Peak
4804	36.31	102	125	H	35.00	10.24	35.70	45.85	64	-18.15	Ave
7202	45.39	111	150	V	36.10	13.18	36.38	58.29	84	-25.71	Peak
7202	33.02	111	150	V	36.10	13.18	36.38	45.92	64	-18.08	Ave
7209	44.43	0	150	H	36.10	13.18	36.38	57.33	84	-26.67	Peak
7209	32.50	0	150	H	36.10	13.18	36.38	45.40	64	-18.60	Ave
Middle Channel Frequency: 2Mb/s, 2440 MHz, Pow 4											
2440	60.59	6	150	V	32.80	4.91	0.00	98.30	-	-	Peak
2440	57.83	6	150	V	32.80	4.91	0.00	95.54	-	-	Ave
2440	66.60	312	153	H	32.80	4.91	0.00	104.31	-	-	Peak
2440	63.05	312	153	H	32.80	4.91	0.00	100.76	-	-	Ave
1596	51.33	144	157	V	28.60	5.07	37.58	47.42	84	-36.58	Peak
1596	38.87	144	157	V	28.60	5.07	37.58	34.96	64	-29.04	Ave
1596	52.72	120	150	H	28.60	5.07	37.58	48.81	84	-35.19	Peak
1596	38.14	120	150	H	28.60	5.07	37.58	34.23	64	-29.77	Ave
4880	46.39	0	150	V	35.30	10.24	35.70	56.23	84	-27.77	Peak
4880	35.62	0	150	V	35.30	10.24	35.70	45.46	64	-18.54	Ave
4881	46.15	0	150	H	35.30	10.24	35.70	55.99	84	-28.01	Peak
4881	33.40	0	150	H	35.30	10.24	35.70	43.24	64	-20.76	Ave
7317	43.91	0	150	V	36.10	13.18	36.48	56.71	84	-27.29	Peak
7317	31.02	0	150	V	36.10	13.18	36.48	43.82	64	-20.18	Ave
7324	44.23	320	150	H	36.10	13.18	36.48	57.03	84	-26.97	Peak
7324	32.39	320	150	H	36.10	13.18	36.48	45.19	64	-18.81	Ave

Frequency (MHz)	S.A. Reading (dBµV)	Turntable Azimuth (degrees)	Test Antenna			Cable Loss (dB)	Pre-Amp. (dB)	Cord. Reading (dBµV/m)	FCC/ISEDC		Note
			Height (cm)	Polarity (H/V)	Factor (dB/m)				Limit (dBµV/m)	Margin (dB)	
High Channel Frequency: 2Mb/s, 2480 MHz, Pow 4											
2480	60.49	6	133	V	33.00	4.91	0.00	98.40	-	-	Peak
2480	57.42	6	133	V	33.00	4.91	0.00	95.33	-	-	Ave
2480	66.20	310	150	H	33.00	4.91	0.00	104.11	-	-	Peak
2480	62.70	310	150	H	33.00	4.91	0.00	100.61	-	-	Ave
2483.5	26.73	0	150	V	33.00	4.91	0.00	64.64	84	-19.36	Peak
2483.5	16.96	0	150	V	33.00	4.91	0.00	54.87	64	-9.13	Ave
2483.5	28.07	0	150	H	33.00	4.91	0.00	65.98	84	-18.02	Peak
2483.5	17.38	0	150	H	33.00	4.91	0.00	55.29	64	-8.71	Ave
1136	51.97	114	150	V	28.30	4.45	38.03	46.69	84	-37.31	Peak
1136	37.21	0	150	V	28.30	4.45	38.03	31.93	64	-32.07	Ave
1596	54.32	85	150	H	28.60	5.07	37.58	50.41	84	-33.59	Peak
1596	38.41	85	150	H	28.60	5.07	37.58	34.50	64	-29.50	Ave
4959	47.80	0	150	V	35.40	10.24	35.70	57.74	84	-26.26	Peak
4959	35.88	0	150	V	35.40	10.24	35.70	45.82	64	-18.18	Ave
4959	45.71	0	150	H	35.40	10.24	35.70	55.65	84	-28.35	Peak
4959	35.95	0	150	H	35.40	10.24	35.70	45.89	64	-18.11	Ave
7437	45.36	291	150	V	36.10	13.23	36.48	58.21	84	-25.79	Peak
7437	33.50	291	150	V	36.10	13.23	36.48	46.35	64	-17.65	Ave
7444	44.97	0	150	H	36.10	13.23	36.48	57.82	84	-26.18	Peak
7444	32.98	0	150	H	36.10	13.23	36.48	45.83	64	-18.17	Ave

1 – 18 GHz Worst Case Pre-Scan, Measured at 1 meter

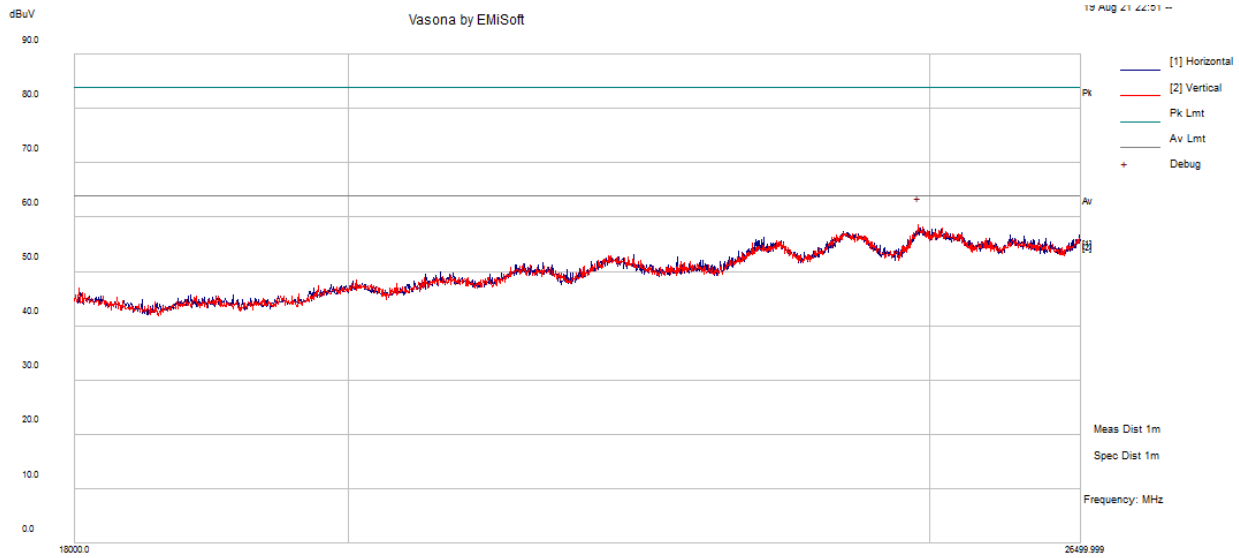
Worst Case Configuration: 2402 MHz 2Mb/s



Frequency (MHz)	S.A. Reading (dBuV)	Correction Factor (dB/m)	Corrected Amplitude (dBµV/m)	Antenna Height (cm)	Antenna Polarity (H/V)	Turntable Azimuth (degrees)	Limit (dBµV/m)	Margin (dB)	Comment
17967.59	43.56	25.1	68.66	103	H	110	84	-15.34	PK
14280.92	43.48	21.42	64.9	162	H	300	84	-19.1	PK
17967.59	**32.88**	**25.1**	**57.98**	**103**	**H**	**110**	**64**	**-6.02**	**Ave**
14280.92	32.56	21.42	53.99	162	H	300	64	-10.01	Ave

18 – 26.5 GHz Worst Case Pre-Scan, Measured at 1 meter

Worst Case Configuration: 2402 MHz 2Mb/s



8 FCC §15.247(a) (2) & ISEDC RSS-247 §5.2, RSS-Gen §6.7 - Emission Bandwidth

8.1 Applicable Standards

According to FCC §15.247(a) (2) and ISEDC RSS-247 §5.2: the minimum 6 dB bandwidth shall be 500 kHz.

8.2 Measurement Procedure

The measurements are based on FCC KDB 558074 D01 DTS Meas Guidance v05r02: Guidance for Performing Compliance Measurements on Digital Transmission Systems (DTS) Operating Under §15.247 section 8: DTS bandwidth.

8.3 Test Equipment List and Details

Manufacturer	Description	Model No.	Serial No.	Calibration Date	Calibration Interval
Agilent	Analyzer, Spectrum	E4446A	MY48250238	2021-02-12	1 year
-	10 dB attenuator	-	-	Each time[1]	N/A
-	RF cable	-	-	Each time[1]	N/A

Note[1]: cable included in the test set-up will be checked each time before testing.
Statement of Traceability: BACL Corp. *attests that all of the calibrations on the equipment items listed above were traceable to NIST or to another internationally recognized National Metrology Institute (NMI), and were compliant with the latest version of A2LA policy P102 "A2LA Policy on Metrological Traceability".*

8.4 Test Environmental Conditions

Temperature:	21º C
Relative Humidity:	39 %
ATM Pressure:	102.0 KPa

The testing was performed by Zhao Zhao on 2021-08-13 at RF test site.

8.5 Test Results

1 Mb/s

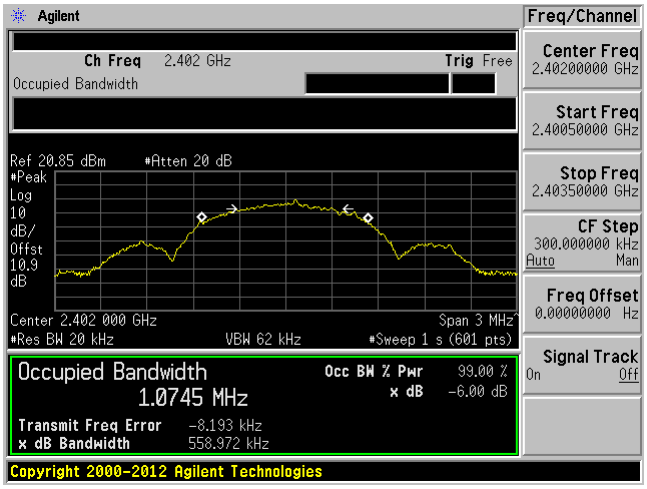
Channel	Frequency (MHz)	99% OBW (MHz)	6 dB OBW (kHz)	6 dB OBW (kHz)
Low	2402	1.0745	734.508	≥ 500
Middle	2440	1.0708	746.987	≥ 500
High	2480	1.0706	716.678	≥ 500

2 Mb/s

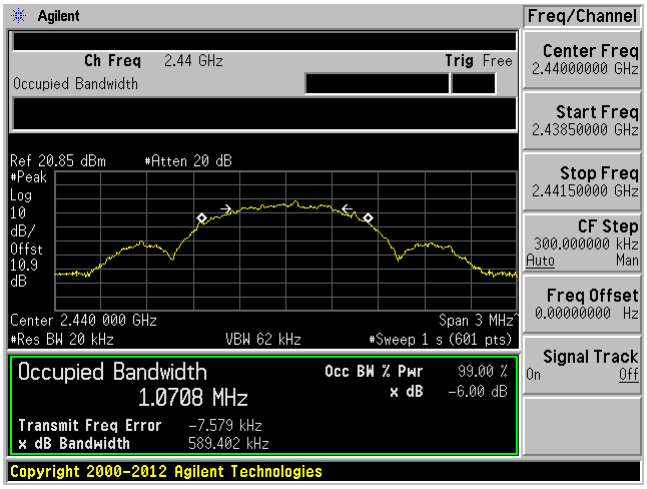
Channel	Frequency (MHz)	99% OBW (MHz)	6 dB OBW (MHz)	6 dB OBW Limit (kHz)
Low	2402	2.0781	1.273	≥ 500
Middle	2440	2.0783	1.385	≥ 500
High	2480	2.0754	1.267	≥ 500

Please refer to the following plots for detailed test results.

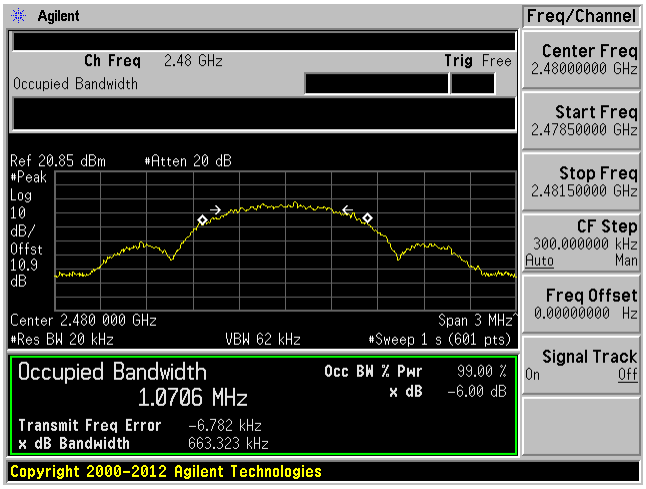
99% OBW, Low Channel: 2402 MHz, 1 Mb/s



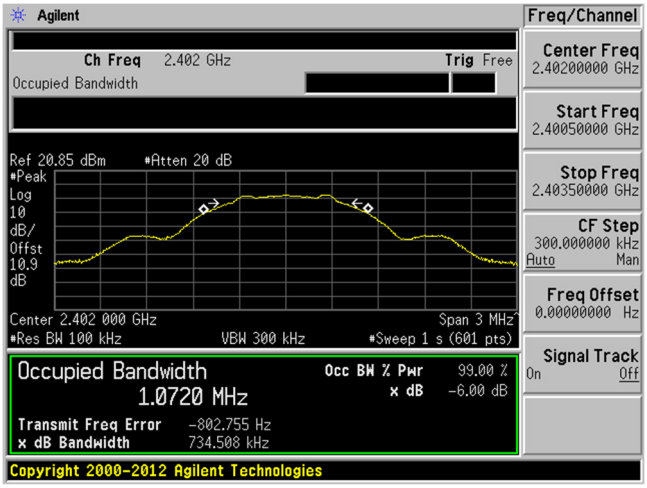
99% OBW, Middle Channel: 2440 MHz, 1 Mb/s



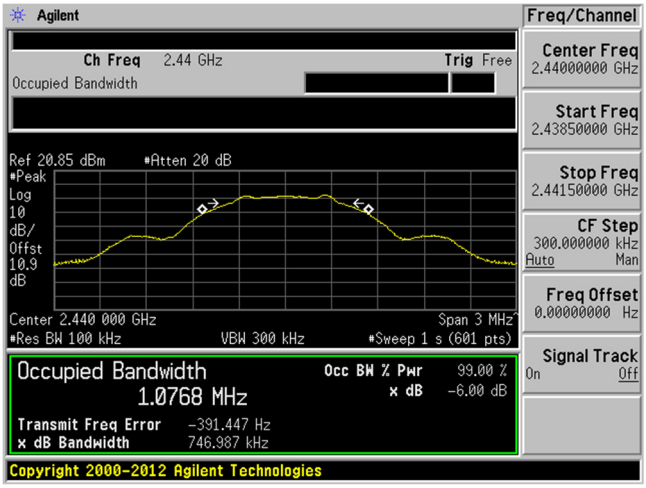
99% OBW, High Channel: 2480 MHz, 1 Mb/s



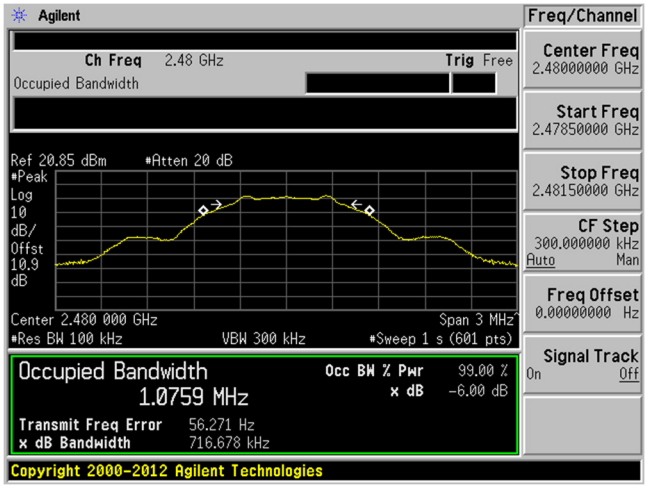
6 dB OBW, Low Channel: 2402 MHz, 1 Mb/s



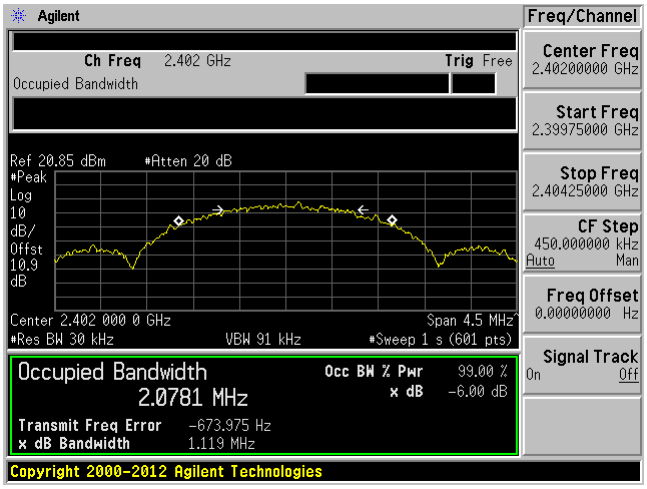
6 dB OBW, Middle Channel: 2440 MHz, 1 Mb/s



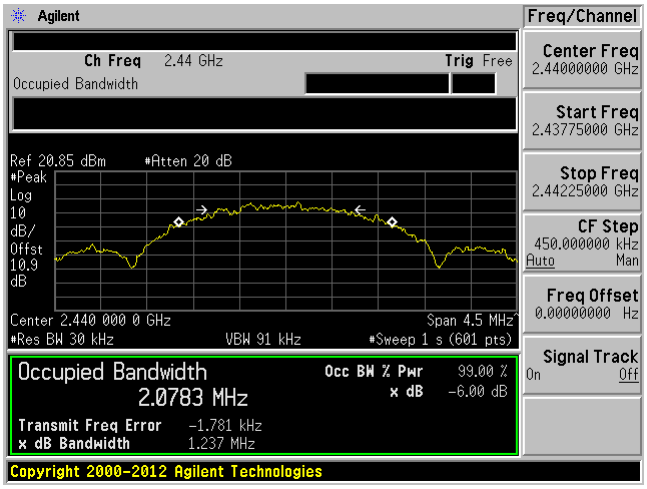
6 dB OBW, High Channel: 2480 MHz, 1 Mb/s



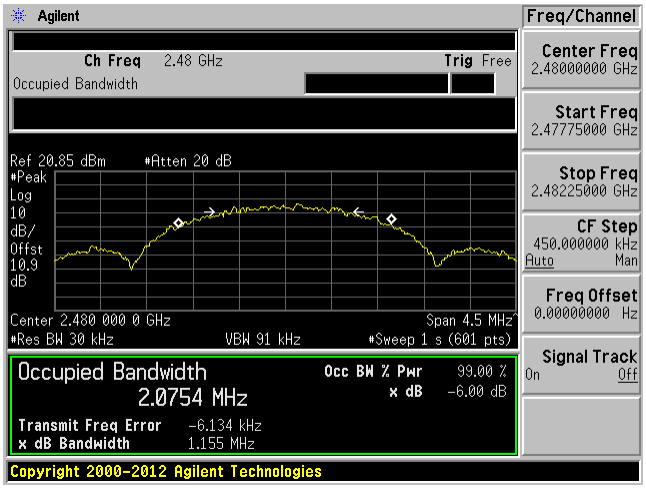
99% OBW, Low Channel: 2402 MHz, 2 Mb/s



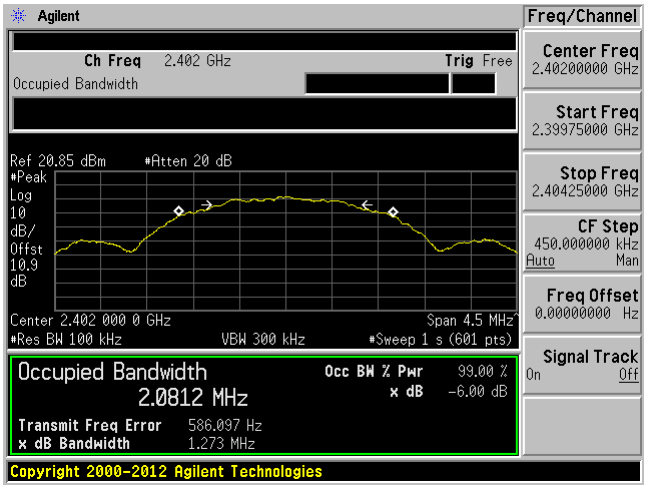
99% OBW, Middle Channel: 2440 MHz, 2 Mb/s



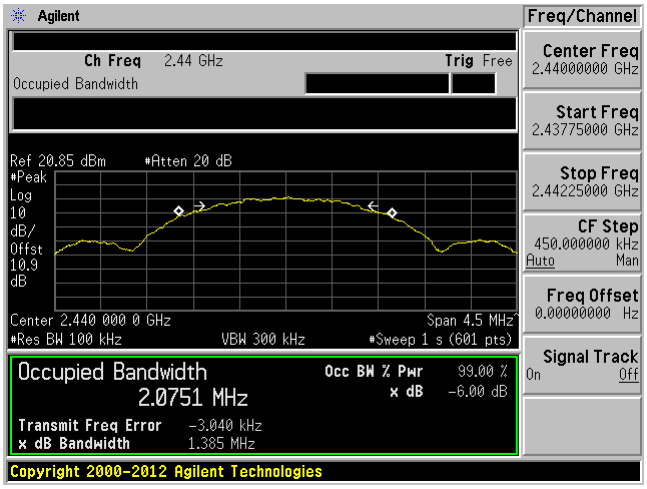
99% OBW, High Channel: 2480 MHz, 2 Mb/s



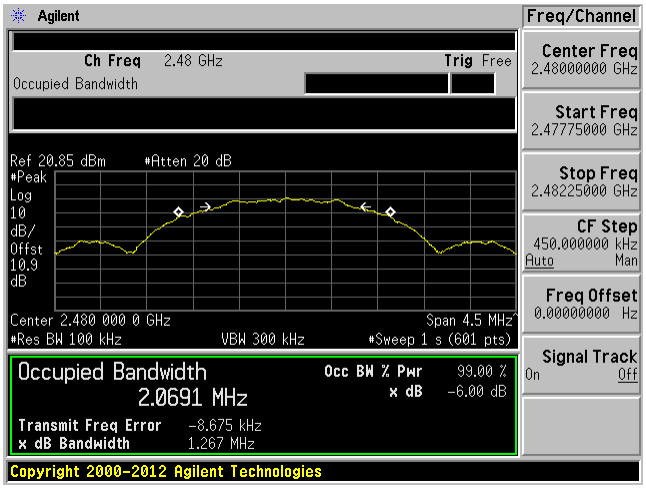
6 dB OBW, Low Channel: 2402 MHz, 2 Mb/s



6 dB OBW, Middle Channel: 2440 MHz, 2 Mb/s



6 dB OBW, High Channel: 2480 MHz, 2 Mb/s



9 FCC §15.247(b) (3) & ISEDC RSS-247 §5.4 - Maximum Output Power

9.1 Applicable Standards

According to 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.

According to RSS-247 §5.4: For DTSs employing digital modulation techniques operating in the bands 902-928 MHz and 2400-2483.5 MHz, the maximum peak conducted output power shall not exceed 1 W. The e.i.r.p. shall not exceed 4 W, except as provided in section 5.4(e).

9.2 Measurement Procedure

The measurements are based on ANSI C63.10-2013, Section 11.9.2.2.2.

9.3 Test Equipment List and Details

Manufacturer	Description	Model No.	Serial No.	Calibration Date	Calibration Interval
Agilent	Analyzer, Spectrum	E4446A	MY48250238	2021-02-12	1 year
-	10 dB attenuator	-	-	Each time[1]	N/A
-	RF cable	-	-	Each time[1]	N/A

Note[1]: cable included in the test set-up will be checked each time before testing.
Statement of Traceability: BACL Corp. *attests that all of the calibrations on the equipment items listed above were traceable to NIST or to another internationally recognized National Metrology Institute (NMI), and were compliant with the latest version of A2LA policy P102 "A2LA Policy on Metrological Traceability".*

9.4 Test Environmental Conditions

Temperature:	21º C
Relative Humidity:	39 %
ATM Pressure:	102.0 KPa

The testing was performed by Zhao Zhao on 2021-08-13 at RF test site.

9.5 Test Results

1 Mb/s

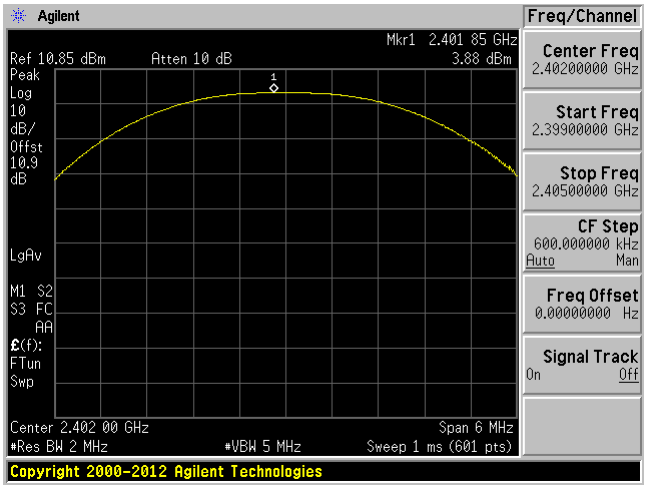
Channel	Frequency (MHz)	Conducted Output Power (dBm)	FCC/ISEDC Limit (dBm)
Low	2402	3.88	30
Middle	2440	3.57	30
High	2480	2.79	30

2 Mb/s

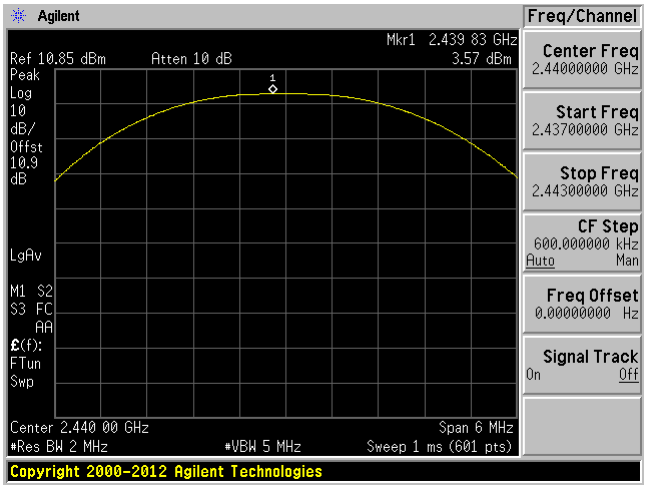
Channel	Frequency (MHz)	Conducted Output Power (dBm)	FCC/ISEDC Limit (dBm)
Low	2402	3.95	30
Middle	2440	3.67	30
High	2480	2.86	30

Please refer to the following measurement plots.

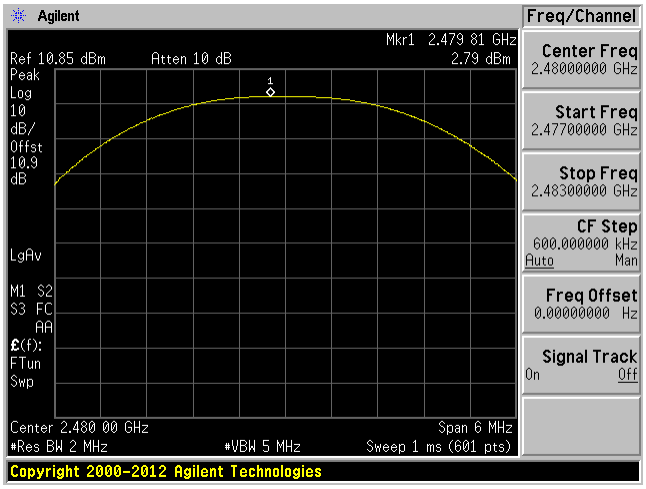
Low Channel: 2402 MHz, 1 Mb/s



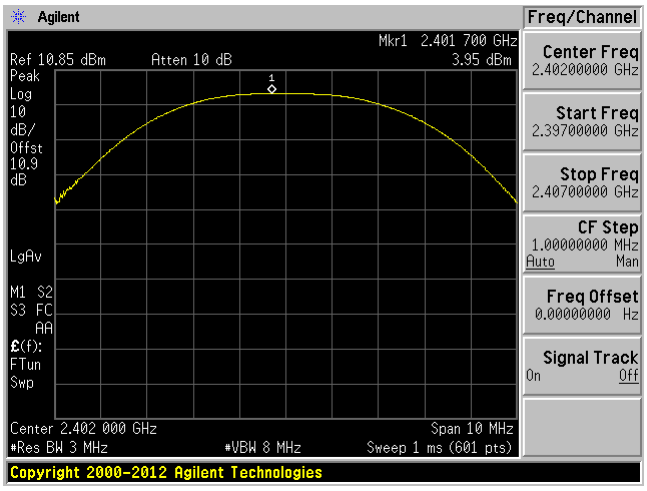
Middle Channel: 2440 MHz, 1 Mb/s



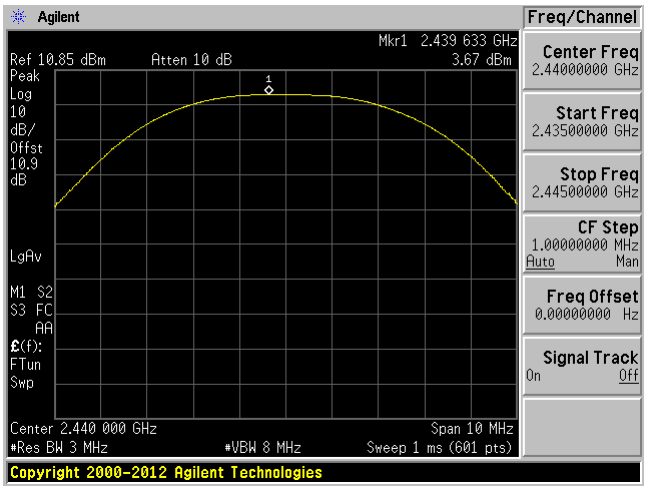
High Channel: 2480 MHz, 1 Mb/s



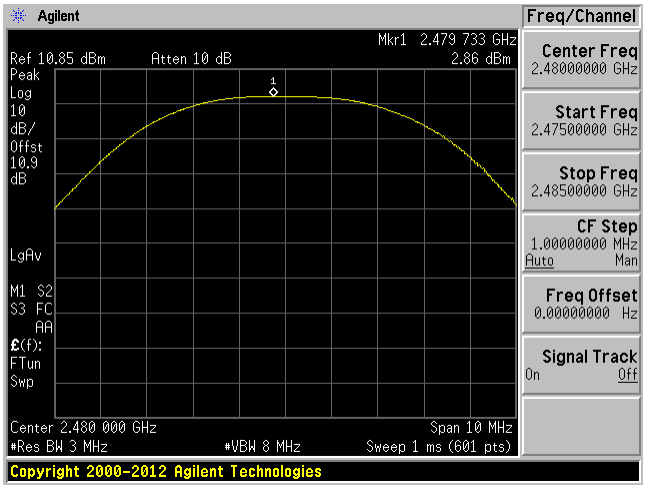
Low Channel: 2402 MHz, 2 Mb/s



Middle Channel: 2440 MHz, 2 Mb/s



High Channel: 2480 MHz, 2 Mb/s



10 FCC §15.247(e) & ISEDC RSS-247 §5.2(2) - Peak Power Spectral Density

10.1 Applicable Standards

According to ECFR §15.247(e) and RSS-247 §5.2 (2) , 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.

10.2 Measurement Procedure

The measurements are based on FCC KDB 558074 D01 DTS Meas Guidance v05r02: Guidance for Performing Compliance Measurements on Digital Transmission Systems (DTS) Operating Under §15.247 section 10: Maximum power spectral density level in the fundamental emission.

10.3 Test Equipment List and Details

Manufacturer	Description	Model No.	Serial No.	Calibration Date	Calibration Interval
Agilent	Analyzer, Spectrum	E4446A	MY48250238	2021-02-12	1 year
-	10 dB attenuator	-	-	Each time[1]	N/A
-	RF cable	-	-	Each time[1]	N/A

Note[1]: cable included in the test set-up will be checked each time before testing.
Statement of Traceability: BACL Corp. *attests that all of the calibrations on the equipment items listed above were traceable to NIST or to another internationally recognized National Metrology Institute (NMI), and were compliant with the latest version of A2LA policy P102 "A2LA Policy on Metrological Traceability".*

10.4 Test Environmental Conditions

Temperature:	21º C
Relative Humidity:	39 %
ATM Pressure:	102.0 KPa

The testing was performed by Zhao Zhao on 2021-08-13 at RF test site.

10.5 Test Results

1 Mb/s

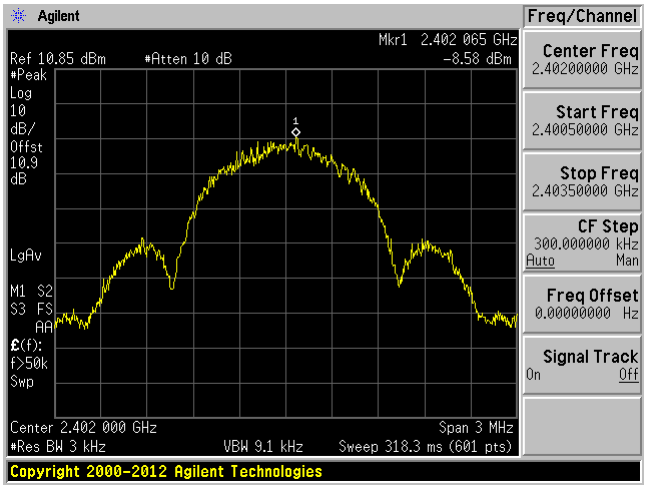
Channel	Frequency (MHz)	Conducted PSD (dBm/3 kHz)	FCC/ISEDC Limit (dBm/3 kHz)
Low	2402	-8.58	8
Middle	2440	-10.24	8
High	2480	-10.66	8

2 Mb/s

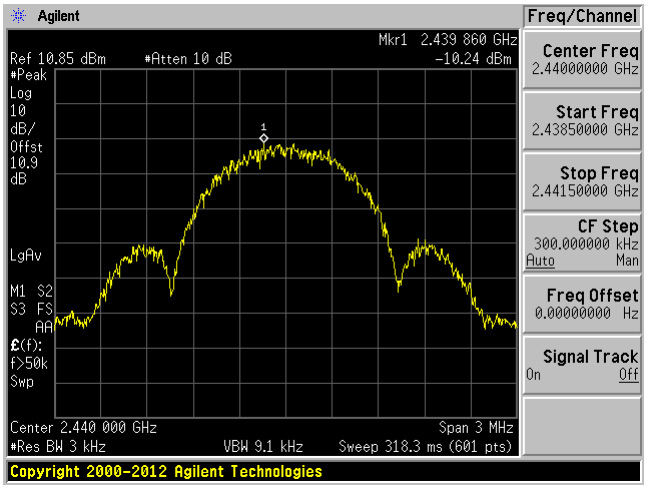
Channel	Frequency (MHz)	Conducted PSD (dBm/3 kHz)	FCC/ISEDC Limit (dBm/3 kHz)
Low	2402	-11.7	8
Middle	2440	-11.21	8
High	2480	-13.07	8

Please refer to the following measurement plots.

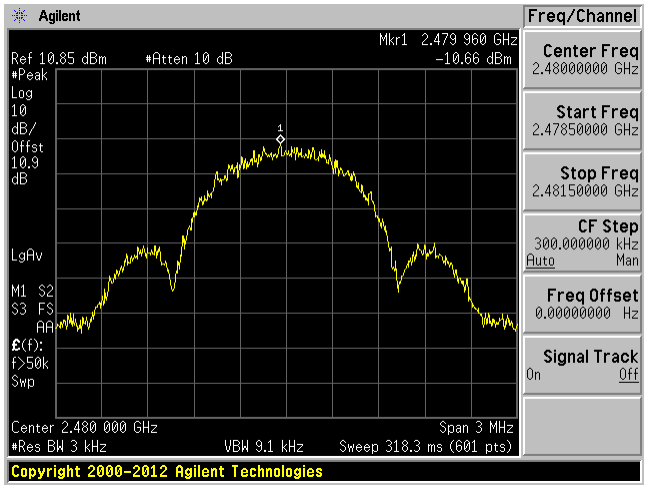
Low Channel: 2402 MHz, 1 Mb/s



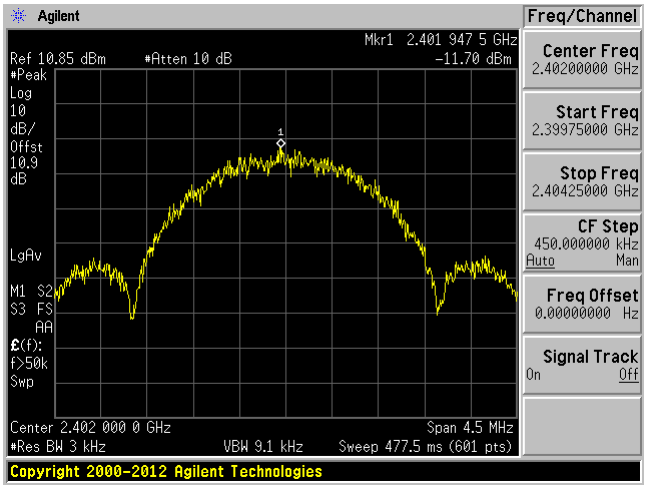
Middle Channel: 2440 MHz, 1 Mb/s



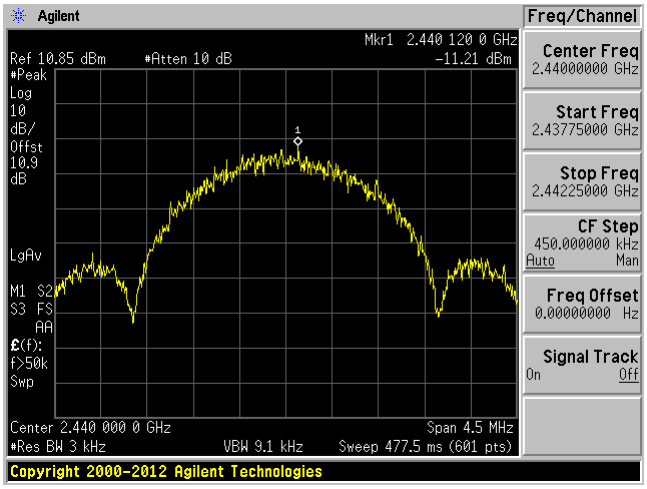
High Channel: 2480 MHz, 1 Mb/s



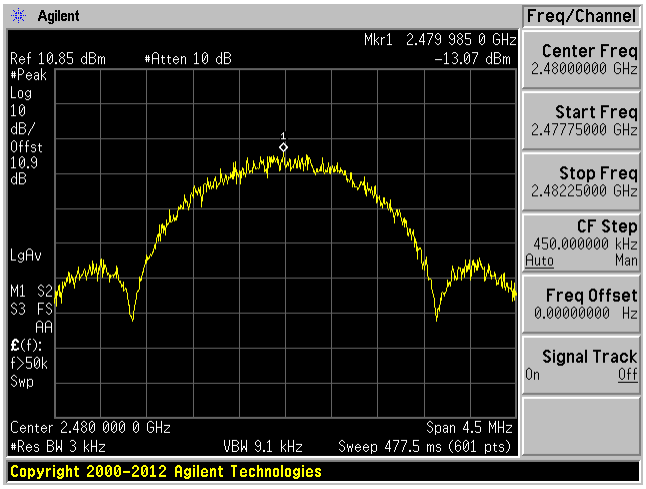
Low Channel: 2402 MHz, 2 Mb/s



Middle Channel: 2440 MHz, 2 Mb/s



High Channel: 2480 MHz, 2 Mb/s



11 FCC §15.247(d) & ISEDC RSS-247 §5.5 - 100 kHz Bandwidth of Band Edges

11.1 Applicable Standards

According to FCC §15.247(d), in any 100 kHz bandwidth outside the frequency bands in which the spread spectrum 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. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emissions limits specified in §15.209(a) see §15.205(c).

According to ISEDC RSS-247 §5.5. In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated device is operating, the RF power that is produced 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 that the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of root-mean-square averaging over a time interval, as permitted under Section 5.4(4), the attenuation required shall be 30 dB instead of 20 dB. Attenuation below the general field strength limits specified in RSS-Gen is not required.

11.2 Measurement Procedure

Span = wide enough to capture the peak level of the emission operating on the channel closest to the band edge, as well as any modulation products which fall outside of the authorized band of operation

RBW = 100 kHz
VBW = 300 kHz
Sweep = coupled
Detector function = peak
Trace = max hold

11.3 Test Equipment List and Details

Manufacturer	Description	Model No.	Serial No.	Calibration Date	Calibration Interval
Agilent	Analyzer, Spectrum	E4446A	MY48250238	2021-02-12	1 year
-	10 dB attenuator	-	-	Each time[1]	N/A
-	RF cable	-	-	Each time[1]	N/A

Note[1]: cable included in the test set-up will be checked each time before testing.
Statement of Traceability: BACL Corp. *attests that all of the calibrations on the equipment items listed above were traceable to NIST or to another internationally recognized National Metrology Institute (NMI), and were compliant with the latest version of A2LA policy P102 "A2LA Policy on Metrological Traceability".*

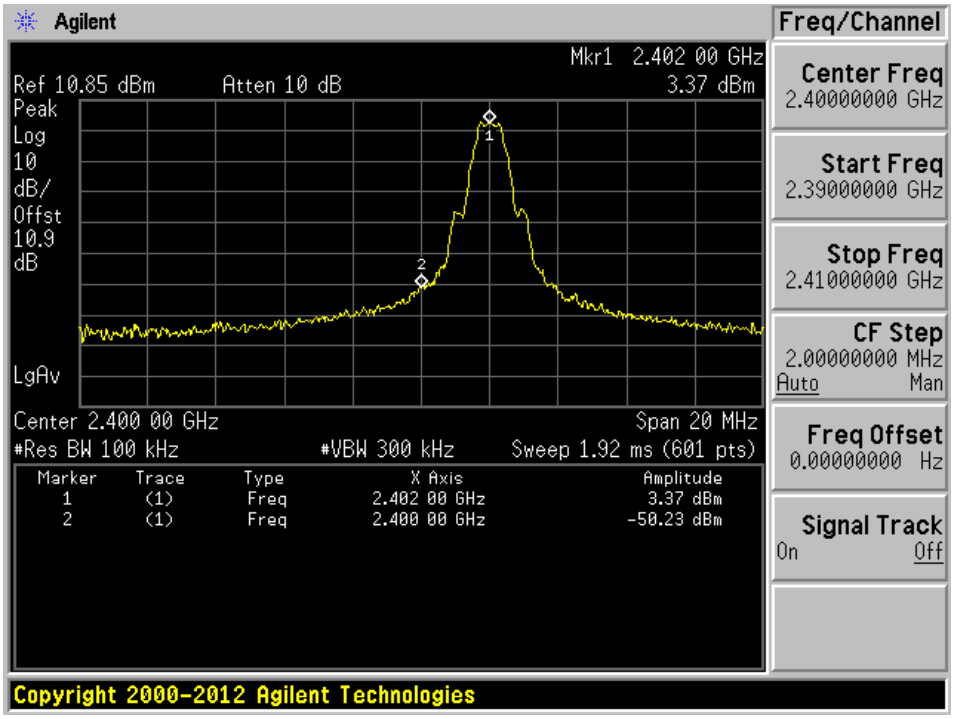
11.4 Test Environmental Conditions

Temperature:	21º C
Relative Humidity:	39 %
ATM Pressure:	102.0 KPa

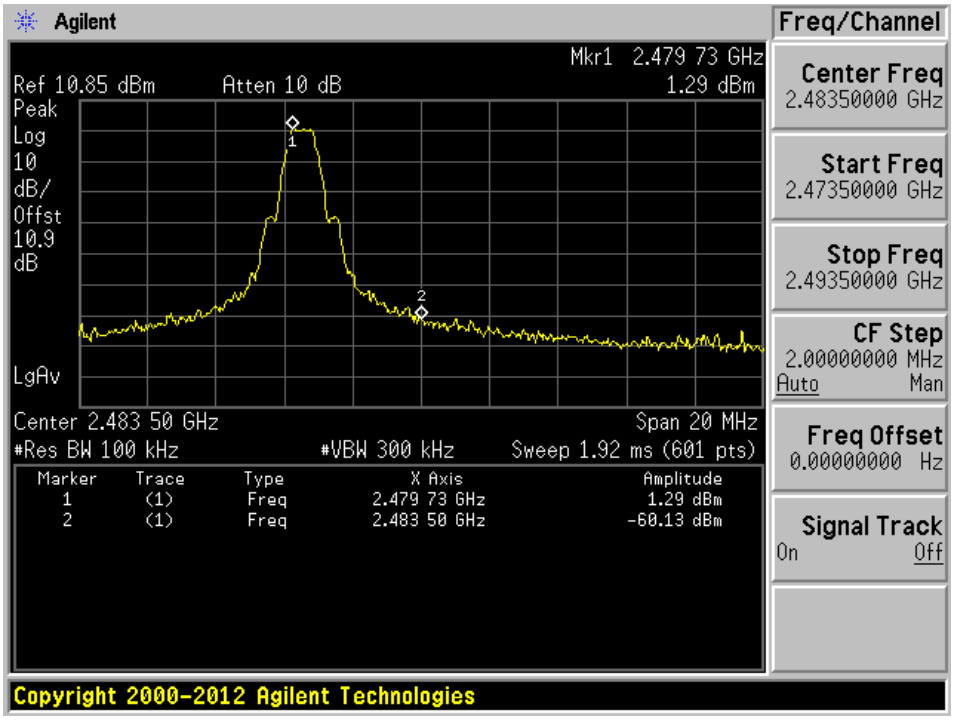
The testing was performed by Zhao Zhao on 2021-08-13 at RF test site.

11.5 Test Results

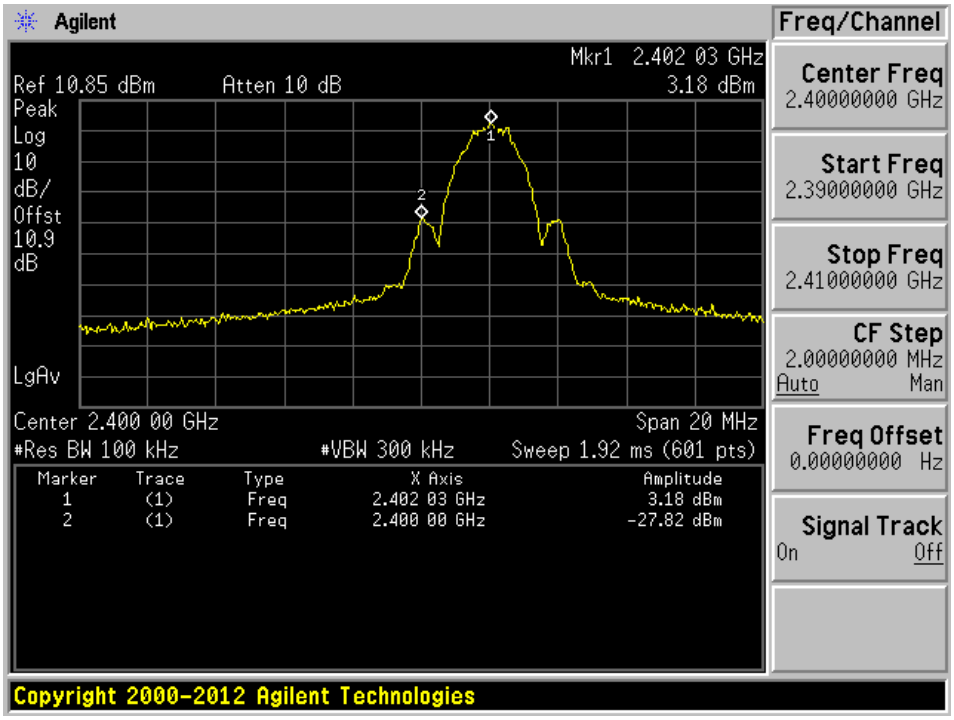
Low Channel: 2402 MHz, 1 Mb/s



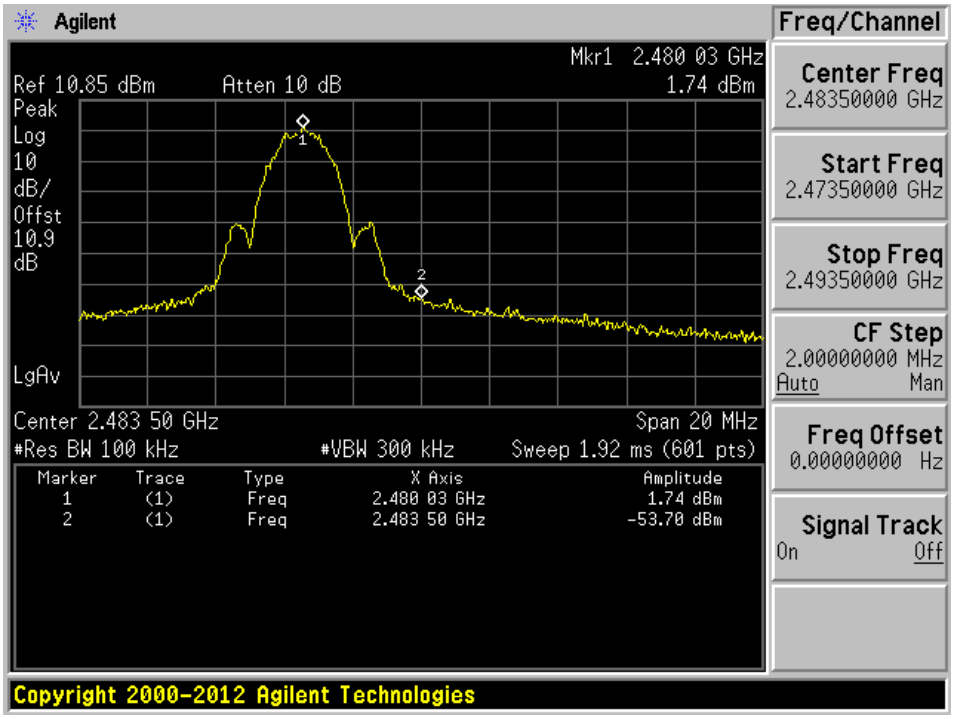
High Channel: 2480 MHz, 1 Mb/s



Low Channel: 2402 MHz, 2 Mb/s



High Channel: 2480 MHz, 2 Mb/s



12 FCC §15.247(d) & ISEDC RSS-247 §5.5 - Spurious Emissions at Antenna Terminals

12.1 Applicable Standards

For FCC §15.247(d) and ISEDC RSS-247 §5.5, 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)).

12.2 Test Procedure

The RF output of the EUT was connected to a spectrum analyzer through appropriate attenuation. The resolution bandwidth of the spectrum analyzer was set at 100 kHz. Sufficient scans were taken to show any out of band emissions up to 10th harmonic.

12.3 Test Equipment List and Details

Manufacturer	Description	Model No.	Serial No.	Calibration Date	Calibration Interval
Agilent	Analyzer, Spectrum	E4446A	MY48250238	2021-02-12	1 year
-	10 dB attenuator	-	-	Each time[1]	N/A
-	RF cable	-	-	Each time[1]	N/A

Note[1]: cable included in the test set-up will be checked each time before testing.
Statement of Traceability: BACL Corp. *attests that all of the calibrations on the equipment items listed above were traceable to NIST or to another internationally recognized National Metrology Institute (NMI), and were compliant with the latest version of A2LA policy P102 "A2LA Policy on Metrological Traceability".*

12.4 Test Environmental Conditions

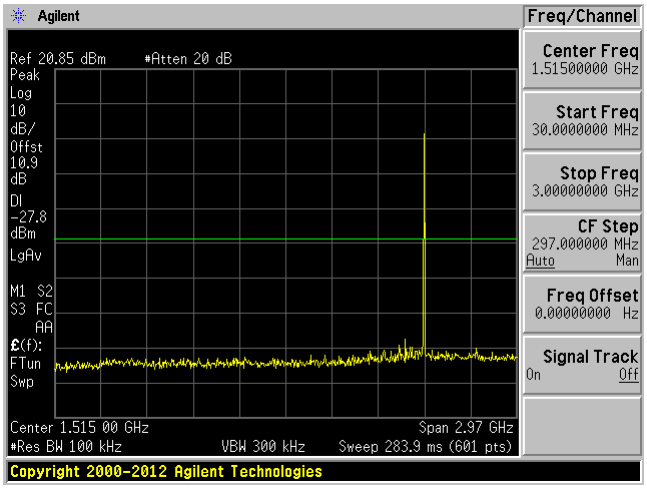
Temperature:	21º C
Relative Humidity:	39 %
ATM Pressure:	102.0 KPa

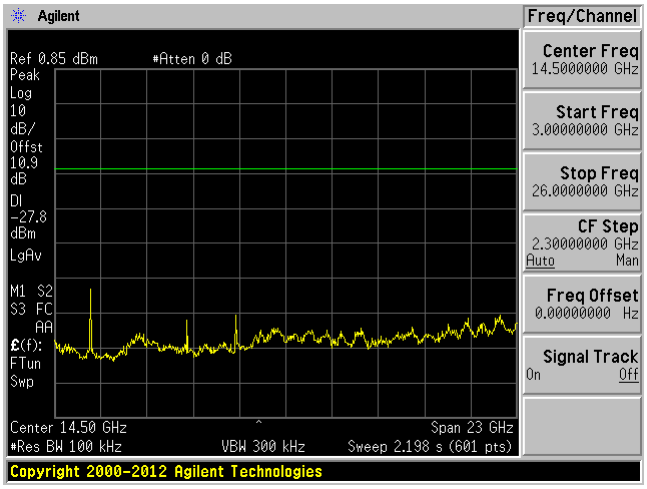
The testing was performed by Zhao Zhao on 2021-08-13 at RF test site.

12.5 Test Results

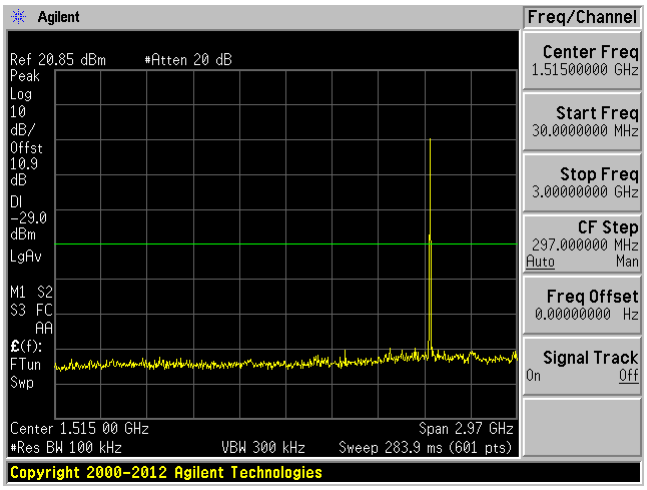
Please refer to the following measurement plots.

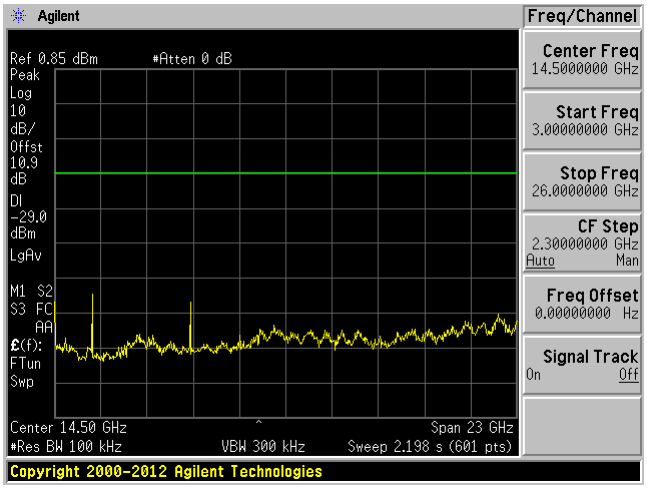
Low Channel: 2402 MHz, 1 Mb/s



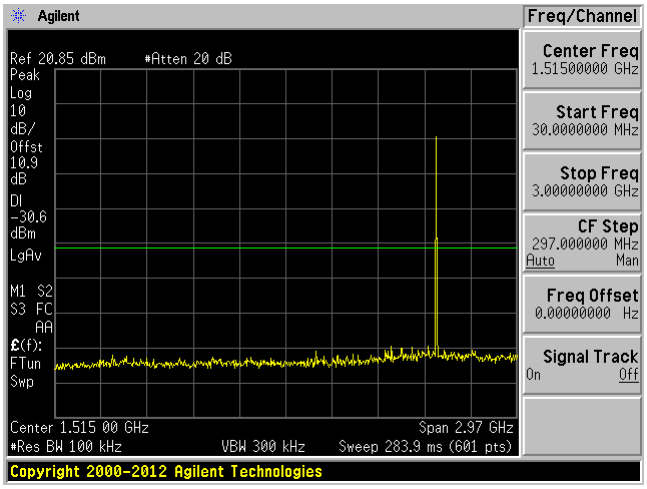


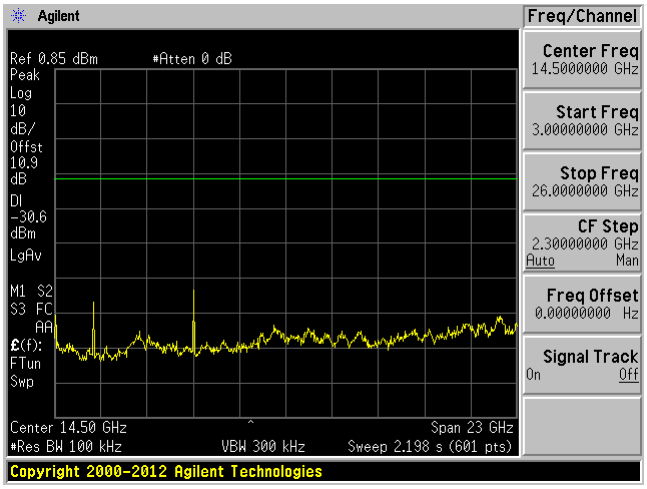
Middle Channel: 2440 MHz, 1 Mb/s



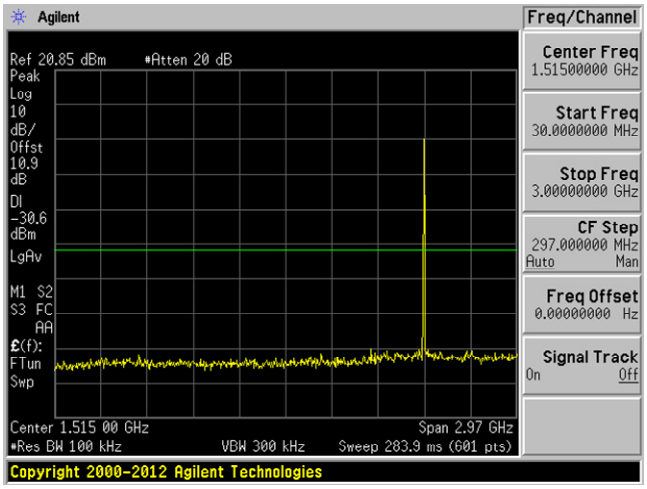


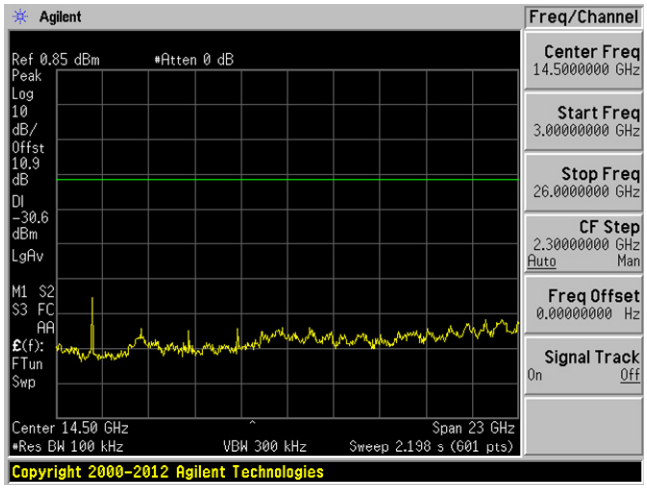
High Channel: 2480 MHz, 1 Mb/s



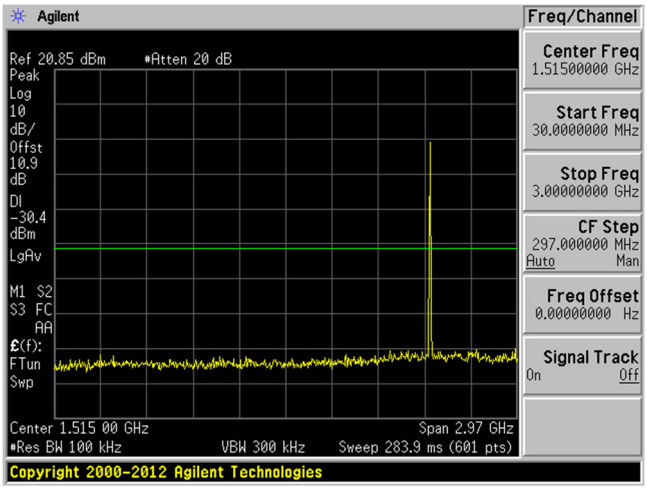


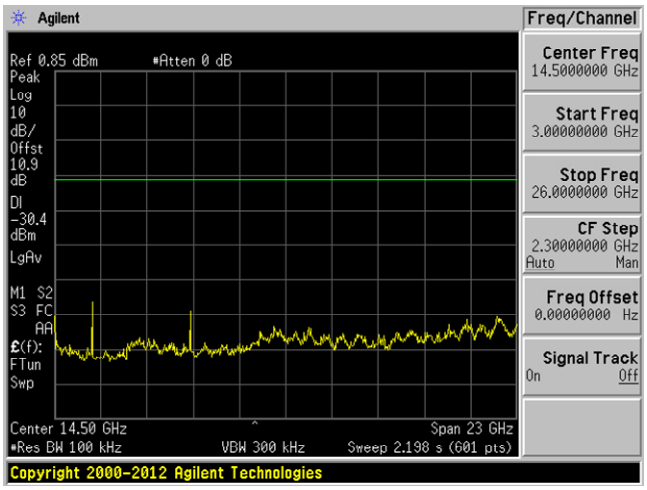
Low Channel: 2402 MHz, 2 Mb/s



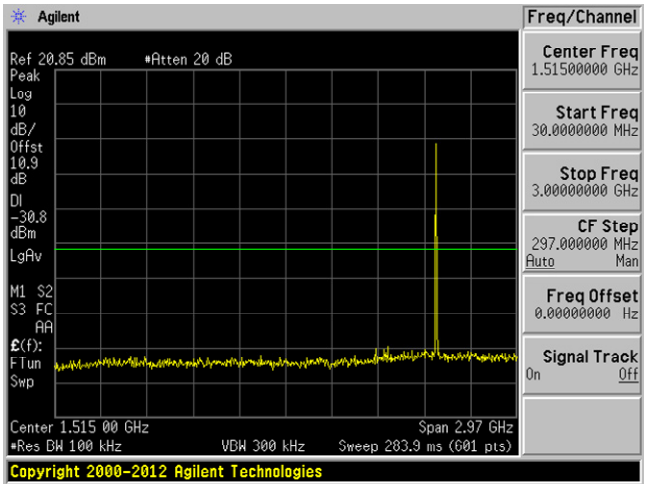


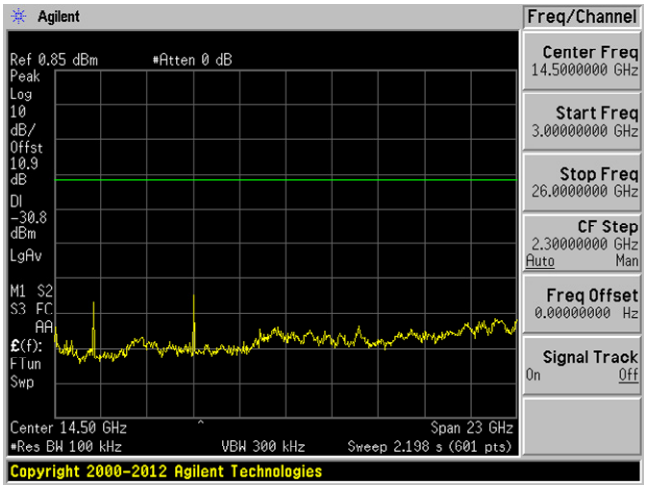
Middle Channel: 2440 MHz, 2 Mb/s





High Channel: 2480 MHz, 2 Mb/s





13 Annex A (Normative) - Test Setup Photographs

Please refer to the attachment

14 Annex B (Normative) - EUT External Photographs

Please refer to the attachment

15 Annex C (Normative) - EUT Internal Photographs

Please refer to the attachment

16 Annex D (Normative) - A2LA Electrical Testing Certificate

Accredited Laboratory

A2LA has accredited

BAY AREA COMPLIANCE LABORATORIES CORP.

Sunnyvale, CA

for technical competence in the field of

Electrical Testing

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 *General requirements for the competence of testing and calibration laboratories*. This laboratory also meets A2LA *R222 - Specific Requirements EPA ENERGY STAR Accreditation Program*. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (*refer to joint ISO-ILAC-IAF Communiqué dated April 2017*).

Presented this 10th day of March 2021.

Trace McInturff, Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 3297.02
Valid to September 30, 2022

For the tests to which this accreditation applies, please refer to the laboratory's Electrical Scope of Accreditation.

Please follow the web link below for a full ISO 17025 scope

https://www.a2la.org/scopepdf/3297-02.pdf

--- END OF REPORT ---