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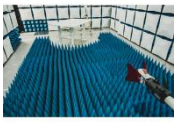

MEASUREMENT REPORT
FCC Part 15.255 / ISED RSS-210 Annex J (DXX)

Applicant Name:
Apple Inc.
One Apple Park Way
Cupertino, CA 95014
United States

Date of Testing:
6/10/2025 - 7/22/2025
Test Report Issue Date:
7/30/2025
Test Site/Location:
Element Materials Technology, Morgan Hill, CA, USA
Test Report Serial No.:
1C2503270032-15.BCG

FCC ID:	**BCG-A3335**
IC:	**579C-A3335**
APPLICANT:	**Apple Inc.**

Application Type:	Certification
Model/HVIN:	A3335, A3452
EUT Type:	Watch
Max. RF EIRP:	0.863 mW (-0.64 dBm) Peak EIRP
Max. RF Output Power:	1.338 mW (1.26 dBm) Peak Conducted
Operating Frequency:	60.5 GHz
FCC Classification:	Low Power Communication Device Transmitter (DXX)
FCC Rule Part(s):	Part 15 Subpart C (15.255)
ISED Specification:	RSS-210 Issue 11, Annex J
Test Procedure(s):	ANSI C63.10-2020

This equipment has been shown to be capable of compliance with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in §2.947. Test results reported herein relate only to the item(s) tested.

I attest to the accuracy of data. All measurements reported herein were performed by me or were made under my supervision and are correct to the best of my knowledge and belief. I assume full responsibility for the completeness of these measurements and vouch for the qualifications of all persons taking them.

RJ Ortanez
Executive Vice President

ACCREDITED
CERT #2041.02

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1.0 INTRODUCTION

1.1 Scope

Measurement and determination of electromagnetic emissions (EMC) of radio frequency devices including intentional and/or unintentional radiators for compliance with the technical rules and regulations of the Federal Communications Commission and the Innovation, Science and Economic Development Canada.

1.2 Element Materials Technology Test Location

These measurement tests were conducted at the Element Materials Technology facility located at 18855 Adams Court, Morgan Hill, CA 95037. The measurement facility is compliant with the test site requirements specified in ANSI C63.4-2014 and KDB 414788 D01 v01r01.

1.3 Test Facility / Accreditations

Measurements were performed at Element Materials Technology located in Morgan Hill, CA 95037, U.S.A.

- Element Materials Technology is an ISO 17025-2017 accredited test facility under the American Association for Laboratory Accreditation (A2LA) with Certificate number 2041.02 for Specific Absorption Rate (SAR), Hearing Aid Compatibility (HAC) testing, where applicable, and Electromagnetic Compatibility (EMC) testing for FCC and Innovation, Science, and Economic Development Canada rules.

- Element Washington DC LLC TCB is a Telecommunication Certification Body (TCB) accredited to ISO/IEC 17065-2012 by A2LA (Certificate number 2041.03) in all scopes of FCC Rules and ISED Standards (RSS).

- Element Materials Technology facility is a registered (22831) test laboratory with the site description on file with ISED.

- Element Washington DC LLC is a Recognized U.S. Certification Assessment Body (CAB # US0110) for ISED Canada as designated by NIST under the U.S. and Canada Mutual Recognition Agreements (MRAs)

2.0 PRODUCT INFORMATION

2.1 Equipment Description

The Equipment Under Test (EUT) is the **Apple Watch FCC ID: BCG-A3335** and **IC: 579C-A3335**. The test data contained in this report pertains only to the emissions due to the EUT's DXX (60.5GHz) transmitter function.

EUT consists of a Apple Watch handheld device containing a 60.5GHz unlicensed/license-exempt data communications transmitter module. A proprietary Wireless Serial Dock with a corresponding 60.5GHz module is needed to activate transmission on the Apple Watch. A magnetic alignment fixture locks the Apple Watch in place on top of the Wireless Serial Dock, thus allowing communication between the Dock and Apple Watch. The Wireless Serial Dock is powered by a USB-C port.

Test Device Serial No.: PTQKY2MRPK, MC7DP4YMHF, MFMFQM632K, L14QHJ0C9T

2.2 Device Capabilities

This device contains the following capabilities:

Multi-band LTE, 5G NR (FR1), 802.11b/g/n WLAN, 802.11a/n UNII, 802.15.4 ab-NB, Bluetooth (1x, EDR, HDR4, HDR8, LE1M, LE2M), NFC, UWB, 60.5GHz Transmitter.

Frequency [GHz]
60.5

Table 2-1. EUT Operational Frequency

Transmission Mode	Modulation Type	Data Rate	Duty Cycle [%]
Mode 1	Amplitude-Shift Keying (ASK)	480 Mbps	30.36
Mode 2	Amplitude-Shift Keying (ASK)	100 Kbps	< 1.0
Mode 3	Amplitude-Shift Keying (ASK)	12 Mbps	2.81

Table 2-2. EUT Transmission Modes

2.3 Antenna Description

The EUT contains one Tx antenna for 60.5GHz transmission. Following antenna gain provided by manufacturer was used for the testing.

Frequency [GHz]	Gain [dBi]
60.5	-1.9

Table 2-3. Highest Antenna Gain

2.4 Test Support Equipment

1	Apple Macbook	Model:	A1398	S/N:	FVFDHG8TP3XY
	w/AC/DC Adapter	Model:	A1435	S/N:	N/A
2	Apple USB-C cable	Model:	N/A	S/N:	N/A
3	Apple Wireless Serial Dock	Model:	A3276	S/N:	DQ84112029B08V22J
	Apple Watch Cradle	Model:	N/A	S/N:	CYV4023012K23SE01MP1K
	Apple Magnetic Charger	Model:	A2515	S/N:	DLC313306ZQ1NR1A7
	Apple Magnetic Charger	Model:	A2879	S/N:	DLCH5T0012A00000WB

Table 2-4. Test Support Equipment List

2.5 Test Configuration

The EUT was tested per the guidance of ANSI C63.10-2020. ANSI C63.10-2020 was also used to reference the appropriate EUT setup for radiated emissions testing and AC line conducted testing. See Sections 3.2 for AC line conducted emissions test setups and 3.3 for radiated emissions test setups. Only the worst case emissions were reported in this test report.

The worst case configuration was investigated for the two enclosure materials, aluminum and titanium. The EUT was also investigated with and without magnetic charger. The worst case configuration found was used for all testing.

For AC line conducted emissions and radiated emissions, the following configuration was used and reported:

- EUT powered by host Laptop via USB-C cable

All data rates and modulations were investigated for different test cases and the worst case data is reported in section 6.0.

2.6 Software and Firmware

The test was conducted with firmware version watchOS 26 installed on the EUT.

2.7 EMI Suppression Device(s)/Modifications

No EMI suppression device(s) were added and no modifications were made during testing.

3.0 DESCRIPTION OF TESTS

3.1 Measurement Procedure

The measurement procedures described in the "American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices" (ANSI C63.10-2020) were used in the measurement of the EUT.

Deviation from measurement procedure…….....None

3.2 AC Line Conducted Emissions

The line-conducted facility is located inside a 7m x 3.66m x 2.7m shielded enclosure. The shielded enclosure is manufactured by AP Americas. The shielding effectiveness of the shielded room is in accordance with MIL-Std-285 or NSA 65-6. A 1m x 1.5m wooden table 80cm high is placed 40cm away from the vertical wall and 80cm away from the sidewall of the shielded room. Two 10kHz-30MHz, 50Ω/50µH Line-Impedance Stabilization Networks (LISNs) are bonded to the shielded room floor. Power to the LISNs is filtered by external high-current high-insertion loss power line filters. The external power line filter is an ETS Lindgren Model LPRX-4X30 (100dB Attenuation, 14kHz-18GHz) and the two EMC/RFI filters are EPCOs 2X60APower Line Filter (100dB Minimum Insertion Loss, 14kHz - 10GHz). These filters attenuate ambient signal noise from entering the measurement lines. These filters are also bonded to the shielded enclosure.

The EUT is powered from one LISN and the support equipment is powered from the second LISN. If the EUT is a DC-powered device, power will be derived from the source power supply it normally will be powered from and this supply line(s) will be connected to the second LISN. All interconnecting cables more than 1 meter were shortened to a 1 meter length by non-inductive bundling (serpentine fashion) and draped over the back edge of the test table. All cables were at least 40cm above the horizontal reference groundplane. Power cables for support equipment were routed down to the second LISN while ensuring that that cables were not draped over the second LISN.

Sufficient time for the EUT, support equipment, and test equipment was allowed in order for them to warm up to their normal operating condition. The RF output of the LISN was connected to the spectrum analyzer and exploratory measurements were made to determine the frequencies producing the maximum emission from the EUT. The spectrum was scanned from 150kHz to 30MHz with a spectrum analyzer. The detector function was set to peak mode for exploratory measurements while the bandwidth of the analyzer was set to 10kHz. The EUT, support equipment, and interconnecting cables were arranged and manipulated to maximize each emission. Once the worst case emissions have been identified, the one EUT cable configuration/arrangement and mode of operation that produced these emissions is used for final measurements on the same test site. The analyzer is set to CISPR quasi-peak and average detectors with a 9kHz resolution bandwidth for final measurements.

Line conducted emissions test results are shown in Section 6.10. Automated test software was used to perform the AC line conducted emissions testing. Automated measurement software utilized is Rohde & Schwarz EMC32, Version 10.50.40.

3.3 Radiated Emissions

The radiated test facilities consisted of an indoor 3 meter semi-anechoic chamber used for final measurements and exploratory measurements from 30MHz - 18GHz, when necessary for radiated emissions measurements in the spurious domain. The measurement area is contained within the semi-anechoic chamber which is shielded from any ambient interference. The test site inside the chamber is a 6m x 5.2m elliptical, obstruction-free area in accordance with Figure 5.7 of Clause 5 in ANSI C63.4-2014. Absorbers are arranged on the floor between the turn table and the antenna mast in such a way so as to maximize the reduction of reflections for measurements above 1GHz. For measurements below 1GHz, the absorbers are removed. A raised turntable is used for radiated measurement. The turn table is a continuously rotatable, remote-controlled, metallic turntable and 2 meters (6.56 ft.) in diameter. The turn table is flush with the raised floor of the chamber in order to maintain its function as a ground plane. An 80cm tall test table made of Styrodur is placed on top of the turn table. A Styrodur pedestal is placed on top of the test table to bring the total table height to 1.5m for measurements above 1GHz.

Radiated power (EIRP) measurements and radiated spurious emissions above 18GHz were performed in a Shielded Anechoic Chamber conforming to the site validation requirements of CISPR 16-1-4. Radiated spurious emission measurements from 9kHz - 18GHz were performed in a semi anechoic chamber (SAC) conforming to the site validation requirements of CISPR 16-1-4. A positioner was used to manipulate the EUT through several positions in space by rotating about the roll axis as shown in the figure below. The positioner was mounted on top of a turntable bringing the total EUT height to 1.5m.

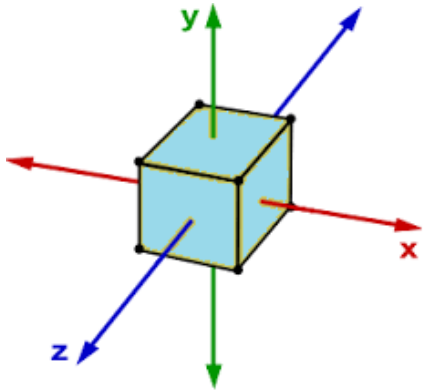


Figure 3-1. Rotation of the EUT Through Three Orthogonal Planes

Per KDB 414788 D01 v01r01, radiated emission test sites other than open-field test sites (e.g., shielded anechoic chambers), may be employed for emission measurements below 30MHz if characterized so that the measurements correspond to those obtained at an open-field test site. To determine test site equivalency, a reference sample transmitting at 149kHz was measured on an open field test site (asphalt with no ground plane) and then measured in the 3m semi-anechoic chamber. A calibrated 60cm loop antenna was used while the reference device was rotated through the X, Y and Z axis in order to capture the worst case level. A maximum deviation of 2.77dB at 149kHz was measured when comparing the 3 meter semi-anechoic chamber to the open field site.

3.3.1 Radiated Emissions Measurement Distance

The measurement antenna is in the far field of the EUT per formula $2D^2/\lambda$ where D is the larger between the dimension of the measurement antenna and the transmitting antenna of the EUT. In this case, "D" is the largest dimension of the measurement antenna. The EUT is manipulated through all orthogonal planes representative of its typical use and for both polarities of the measurement antenna in order to achieve the highest signal level. The worst case position found was used for all radiated testing.

Frequency Range [GHz]	Wavelength [centimeters]	Farfield Distance [meters]	Measurement Distance [meters]
18-40	0.750	0.65	1.00
40-57	0.526	0.99	1.00
71-90	0.333	0.71	1.00
90-140	0.214	0.54	1.00
140-200	0.150	0.32	1.00

Table 3-1. Far-Field Distance & Measurement Distance per Frequency Range (Out-of-Band Testing)

Frequency Range [GHz]	Wavelength [centimeters]	Farfield Distance [meters]	Measurement Distance [meters]
57-71	0.422	0.60	0.60

Table 3-2. Far-Field Distance & Measurement Distance per Frequency Range (In-Band Testing)

4.0 MEASUREMENT UNCERTAINTY

The measurement uncertainties shown below were calculated in accordance with the requirements of ANSI C63.23-2012. All measurement uncertainty values are shown with a coverage factor of k = 2 to indicate a 95% level of confidence. The measurement uncertainty shown below meets or exceeds the U_{CISPR} measurement uncertainty values specified in CISPR 16-4-2 and, thus, can be compared directly to specified limits to determine compliance.

Contribution	Expanded Uncertainty (±dB)
Lince Conducted Disturbance	2.07
Radiated Disturbance (<30MHz)	4.12
Radiated Disturbance (30MHz-1GHz)	4.85
Radiated Disturbance (1GHz-18GHz)	5.08
Radiated Disturbance (>18GHz)	5.22
Radiated Disturbance (>40GHz)	5.71

5.0 TEST EQUIPMENT CALIBRATION DATA

Test Equipment Calibration is traceable to an accredited ISO/IEC 17025 calibration facility. Measurements antennas used during testing were calibrated in accordance to the requirements of ANSI C63.5-2017.

Manufacturer	Model	Description	Cal Date	Cal Interval	Cal Due	Serial #
Agilent	MSO9404A	Mixed Signal Oscilloscope	4/2/2025	Annual	4/2/2026	MY57220110
Agilent Technologies	N9030A	3Hz-26.5GHz PXA Signal Analyzer	10/31/2024	Annual	10/31/2025	MY55330128
ATM	180-442-KF	20dB Nominal Gain Horn Antenna	3/24/2025	Annual	3/24/2026	T058601-02
Rohde & Schwarz	ENV216	Two-Line V-Network	4/25/2025	Annual	4/25/2026	101364
MIWV	WR-19 Waveguide Antenna	WR-19 Waveguide Antenna 40 GHz - 60 GHz	4/17/2024	Biennial	4/17/2026	5RQ11A
MIWV	WR-12 Waveguide Antenna	WR-12 Waveguide Antenna 60GHz - 90GHz	4/17/2024	Biennial	4/17/2026	VQQ11K
MIWV	WR-08 Waveguide Antenna	WR-08 Waveguide Antenna 90GHz - 140GHz	4/17/2024	Biennial	4/17/2026	LQQ11X
MIWV	WR-05 Waveguide Antenna	WR-05 Waveguide Antenna 140GHz - 220GHz	4/17/2024	Biennial	4/17/2026	AQQ11S
ESPEC	SU-241	Table Top Temperature Chamber	10/24/2024	Annual	10/24/2025	92009574
ETS-Lindgren	3117	Double Ridged Guide Antenna (1-18 GHz)	9/25/2024	Annual	9/25/2025	240109
MIWV	950V/385	MI-Wave Products Inc. RF detector V-Band (50-75GHz)	5/12/2025	Annual	5/12/2026	FSKY8L
Rohde & Schwarz	TS-PR18	Pre-Amplifier (1GHz - 18GHz)	8/14/2024	Annual	8/14/2025	101648
Rohde & Schwarz	FSW67	Signal and Spectrum Analyzer (2Hz - 67GHz)	1/7/2025	Annual	1/7/2026	101366
Rohde & Schwarz	SMB100A	RF and Microwave Signal Generator	3/18/2025	Annual	3/18/2026	180584
Rohde & Schwarz	SMB100A	RF and Microwave Signal Generator	4/17/2025	Annual	4/17/2026	180080
Rohde & Schwarz	ZNB40	Vector Network Analyzer 2 Port	2/20/2025	Annual	2/20/2026	101412
Rohde & Schwarz	TS-PR8	Pre-Amplifier (30MHz - 8GHz)	11/15/2024	Annual	11/15/2025	102326
Rohde & Schwarz	TS-PR1840	Pre-Amplifier (18GHz - 40GHz)	6/3/2025	Annual	6/3/2026	100052
Rohde & Schwarz	HFH2-Z2	Loop Antenna	5/12/2025	Annual	5/12/2026	100546
Rohde & Schwarz	HFH2-Z2	Loop Antenna	6/26/2025	Annual	6/26/2026	100519
Schwarzbeck	VULB 9162	Bilog Antenna (30MHz - 6GHz)	9/18/2024	Annual	9/18/2025	358
Virginia Diodes, Inc.	WR19SAX	SAX Module (40-60GHz)	4/7/2025	Biennial	4/7/2027	SAX459
Virginia Diodes, Inc.	WR12SAX	SAX Module (60-90GHz)	4/7/2025	Biennial	4/7/2027	SAX 461
Virginia Diodes, Inc.	WR8.0SAX	SAX Module (90-140GHz)	4/7/2025	Biennial	4/7/2027	SAX 462
Virginia Diodes, Inc.	WR5.1SAX	SAX Module (140-220GHz)	4/7/2025	Biennial	4/7/2027	SAX 463
Sage Millimeter, Inc.	SWC-15VF-E1	WR-15 End Launch Adapter *	7/25/2024	Annual	7/25/2025	18058-01
Eravant	SBL-5037533550-1515-E1	WR-15 Low Noise Amplifier	7/25/2024	Annual	7/25/2025	11060-01

Table 5-1. Test Equipment List

Notes:

1. For equipment listed above that has a calibration date or calibration due date that falls within the test date range, care was taken to ensure that this equipment was used after the calibration date and before the calibration due date.

2. * denotes passive equipment that have been internally verified/calibrated.

6.0 TEST RESULTS

6.1 Summary

Company Name: Apple Inc.

FCC ID: BCG-A3335

IC: 579C-A3335

FCC Classification: Part 15C Low Power Communications Device Transmitter (DXX)

FCC Part Section(s)	RSS Part Section(s)	Test Description	Test Limit	Test Condition	Test Result	Reference
15.255(e)(1)	RSS-210 Annex J.3.3.d	6dB Emission Bandwidth	N/A	RADIATED	N/A	Section 6.2
2.1049	RSS-Gen [6.7]	99% Occupied Bandwidth	N/A		N/A	Section 6.3
15.255(c)(1)(i)	RSS-210 Annex J.3.3.a	Equivalent Isotropic Radiated Power	43dBm (Peak) & 40dBm (Avg)		PASS	Section 6.4
15.255(e)	RSS-210 Annex J.3.3.d	Peak Conducted Output Power	(EBW x 500 mW) / 100 MHz if EBW < 100MHz ; 500 mW if EBW > 100MHz		PASS	Section 6.5
15.255(d)	RSS-210 Annex J.4.c	Radiated Spurious Emissions (Above 40GHz)	90 pW/cm^2 at a distance of 3 meters		PASS	Section 6.6
15.205 15.209	RSS-Gen [8.9]	Radiated Spurious Emissions (Below 40GHz)	Emissions in restricted bands must meet the radiated limits detailed in 15.209 (RSS-Gen [8.9])		PASS	Section 6.7; Section 6.8
15.255(f)	RSS-210 Annex J.6	Frequency Stability	Fundamental emissions stay within authorized frequency block over the temperature and voltage ranges tested		PASS	Section 6.9
15.207	RSS-Gen [8.8]	AC Line Conducted Emissions 150kHz – 30MHz	< FCC 15.207 limits (RSS-Gen [8.8])	AC LINE CONDUCTED	PASS	Section 6.10

Table 6-1. Summary of Test Results

Notes:

1) All modes of operation and modulations were investigated. The test results shown in the following sections represent the worst case results.

2) Analyzer plots are taken with the appropriate correction factors to account for system losses, antenna factor, and/or distance corrections.

6.2 6dB Emission Bandwidth

§15.255(e)(1); RSS-210 Annex J.3.3.d

Test Overview

The emission bandwidth (EBW) is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least the specified amount below the maximum level of the modulated carrier.

Specifically in CFR 15.255 and RSS-210 Annex J.3.3.d, emission bandwidth is defined as the instantaneous frequency range occupied by a steady state radiated signal with modulation, outside which the radiated power spectral density never exceeds 6 dB below the maximum radiated power spectral density in the band, as measured with a 100 kHz resolution bandwidth spectrum analyzer.

Test Procedure Used

ANSI C63.10-2020

Test Settings

1. The signal analyzer's automatic "X dB bandwidth" measurement capability was used to perform EBW measurements (where X = 6 dB). The bandwidth measurement was not influenced by any intermediate power nulls in the fundamental emission
2. Span = 2 to 3 x EBW (centered on the carrier frequency)
3. RBW = 100 kHz
4. VBW ≥ 3 x RBW
5. Detector = Peak
6. Trace Mode = Max Hold
7. Sweep = No faster than coupled (auto) time
8. The trace was allowed to stabilize
9. If necessary, steps 2 – 7 were repeated after changing the measurement span such that it would be 2 to 3 x EBW observed in Step 8

Test Setup

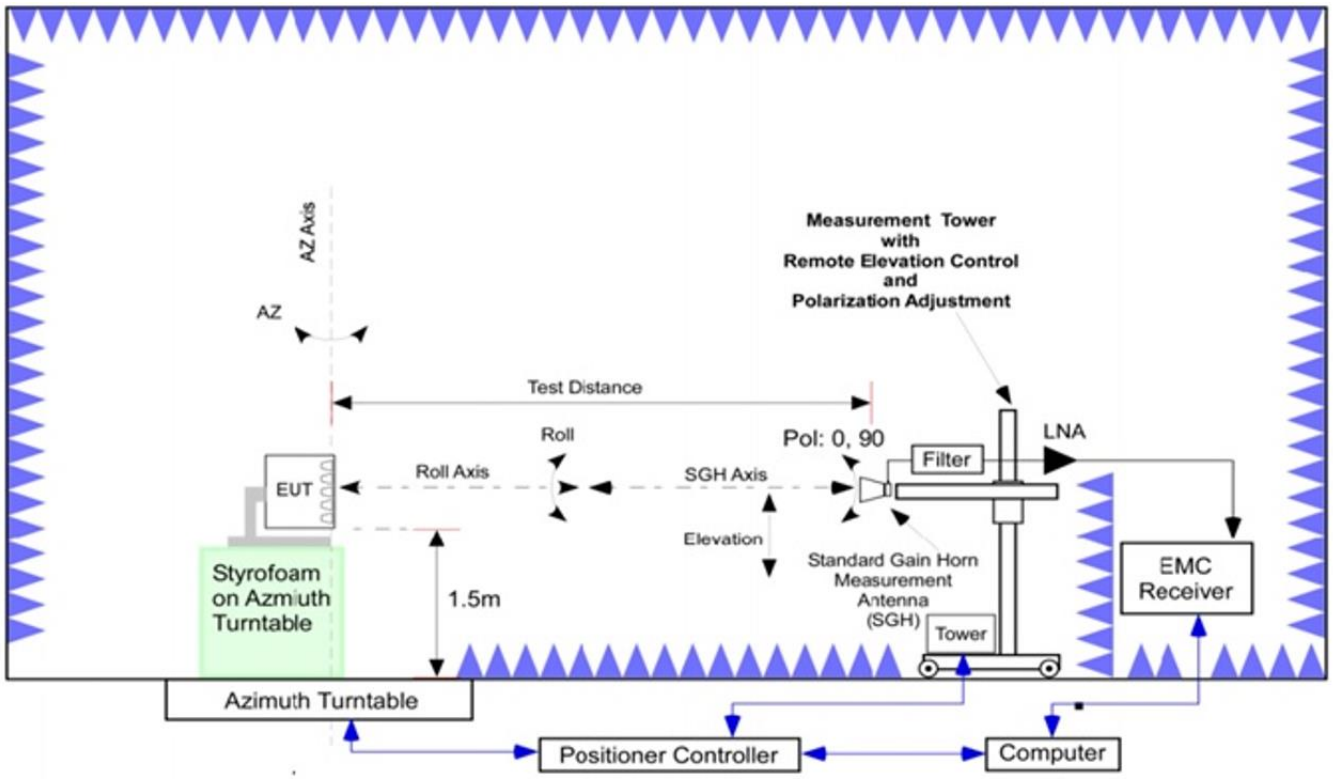
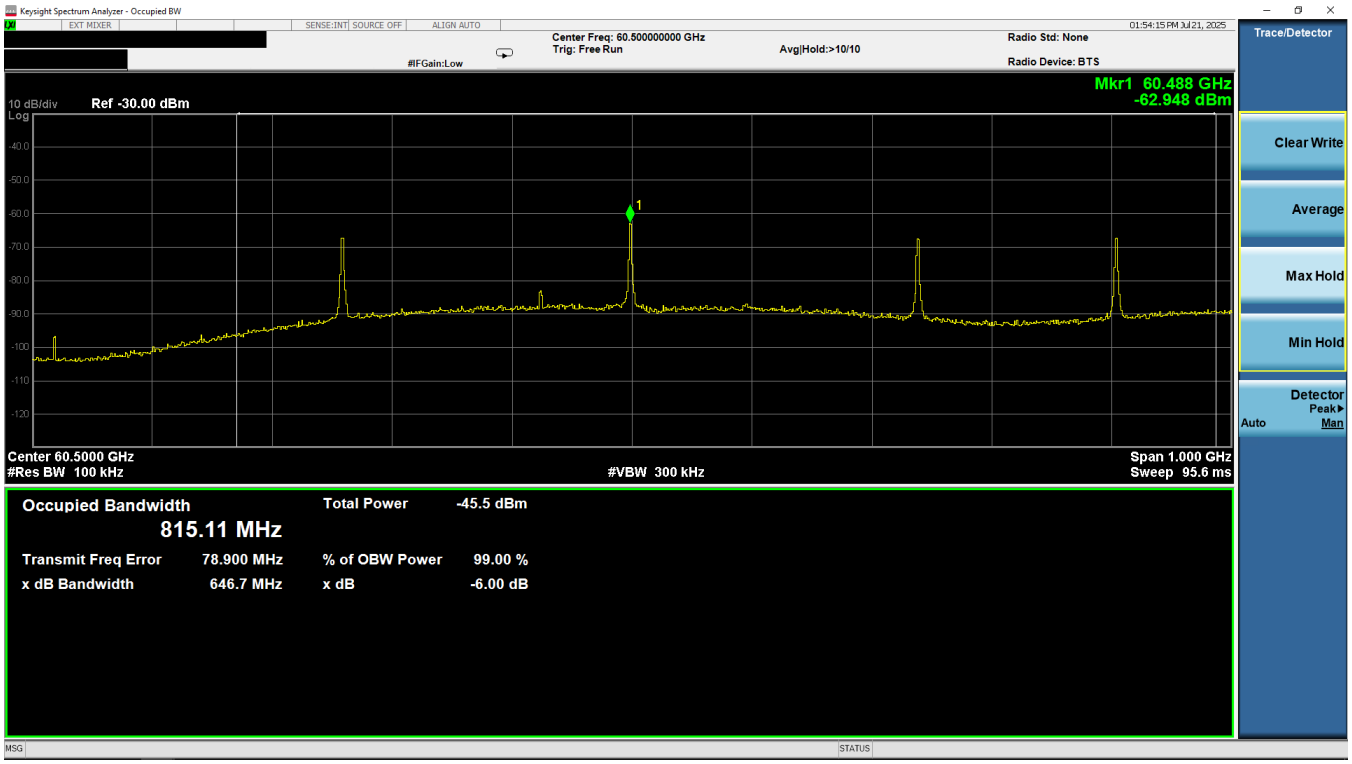


Figure 6-1. Bandwidth Measurement Test Setup

Test Notes

1. All modes of operation were investigated and the worst case configuration results are reported in this section

2. Radiated measurements were ensured to be taken in the Far-Field. Far-Field test distances are shown in Section 3.3.1



Plot 6-1. 6dB Bandwidth Measurement (Mode 1)

Test Result

Mode 1, Measured 6dB Bandwidth = 646.7 MHz

6.3 99% Occupied Bandwidth

§2.1049; RSS-Gen [6.7]

Test Overview

The occupied bandwidth or the "99% emission bandwidth" is defined as the frequency range between two points, one above and the other below the carrier frequency, within which 99% of the total transmitted power of the fundamental transmitted emission is contained.

Test Procedure Used

ANSI C63.10-2020 Section 9.4
RSS-Gen [6.7]

Test Settings

1. The signal analyzer's automatic "99% bandwidth" measurement capability was used to perform OBW measurements. The bandwidth measurement was not influenced by any intermediate power nulls in the fundamental emission
2. Span = Approximately 1.5 – 5 x OBW (centered on the carrier frequency)
3. RBW = 1 MHz
4. VBW ≥ 3 x RBW
5. Detector = Peak
6. Trace Mode = Max Hold
7. Sweep = No faster than coupled (auto) time
8. The trace was allowed to stabilize
9. If necessary, steps 2 – 7 were repeated after changing the measurement span such that it would be approximately 1.5 – 5 x OBW (centered on the carrier frequency) observed in Step 8

Test Setup

Test setup is same as shown in **Figure 6-1**.

Test Notes

1. All modes of operation were investigated and the worst case configuration results are reported in this section
2. Radiated measurements were ensured to be taken in the Far-Field. Far-Field test distances are shown in Section 3.3.1

Plot 6-2. 99% Occupied Bandwidth Measurement (Mode 1)

Test Result

Mode 1, Measured 99% Occupied Bandwidth = 2.946 GHz

6.4 Equivalent Isotropic Radiated Power (EIRP)

§15.255(c)(1)(i); RSS-210 Annex J.3.3.a

Test Overview

Equivalent Isotropic Radiated Power (EIRP) measurements are performed with an RF detector that has a detection bandwidth that encompasses the 57-71GHz band and has a video bandwidth of at least 10MHz. Average emission levels shall be measured over the actual time period during which transmission occurs.

Within the 57-71 GHz band, the average power of any emission shall not exceed +40 dBm and the peak power of any emission shall not exceeed +43 dBm.

Test Procedures Used

ANSI C63.10-2020 Section 9.9

Test Settings

1. Fundamental emission levels are measured using a radiated test setup and substitution procedure as outlined in ANSI C63.10-2020 Subclause 9.9.
2. The measurement equipment is a mm-Wave RF detector that has a RF bandwidth encompassing the entire authorized frequency range, conntected to the 50 Ohm input of a digital storage oscilloscope (DSO).
3. The sampling rate of the DSO is set to atleast twice the signal bandwidth. Memory depth, triggering, and sweep speed of the DSO are adjusted to obtain a display that is representative of the signal considering the type of modulation.
4. All radiated measurements are made in the far-field. The far-field boundary distance of the EUT antenna or measurement antenna (whichever is largest) is used for testing. Maximization is completed to ensure highest signal level is recorded.
5. The EUT is set to transmit, and the resulting Peak voltage measurement from the DSO is recorded. DSO measurements are ensured to be made during the highest amplitude RF Burst interval.
6. The EUT is then replaced by an unmodulated mm-Wave source.
7. The amplitude of the mm-Wave source is incrementally increased until the same Peak voltage measured from the DSO in Step 5 is re-created.
8. Once the equivalent voltage reading from the DSO is re-created, a wideband mm-Wave measurement instrument is then used to measure the power from the mm-Wave source. This is the substitution power level.
9. Repeat steps 1-5 for the Average voltage measurement. Average measurements are ensured to be taken during the ON time of the EUT transmission.
10. Calculate Peak and Average EIRP from the Peak and Average Substitution Power (respectively) at the output of the measurement antenna. See sample calculations.

Test Setup

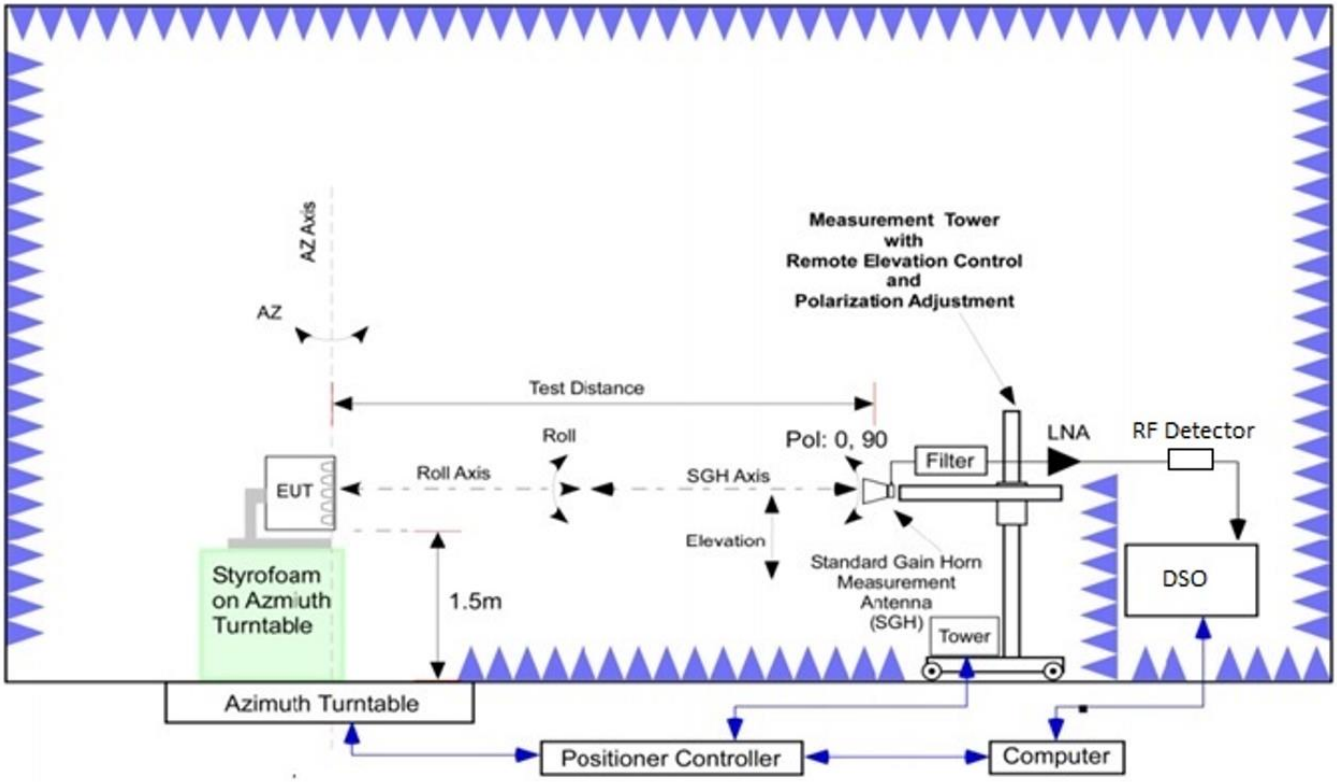


Figure 6-2. EIRP Measurement Test Setup

Test Notes

1) All modes of opertation were investigated and the worst case configuration results are reported in this section

2) EIRP measurements were ensured to be taken in the Far-Field. Far-field test distances are shown in Section 3.3.1

Sample Calculations

Calculating EIRP from Field Strength:

$$\mathbf{EIRP}_{[dBm]} = 21.98 - 20\log(\lambda) + 20\log(D_{measured}) + P - G$$

Where:

EIRP	is the equivalent isotropic radiated power in dBm
λ	is the wavelength of the emission under investigation [300 / f_{MHz}], in m
$D_{measured}$	is the measurement distance in meters
P	is the power measured at the output of the test antenna, in dBm ; where
G	is the gain of the test antenna, in dBi

Note:

1. The measured power P includes all applicable instrument correction factors up to the connection to the measurement antenna.
2. In the EIRP tables below, “substitution system loss” represents all the applicable instrument correction factors up to the connection to the “substitution Rx antenna.”

Average Voltage Within RF Burst:

= (Measured Average Voltage over Entire Sweep) x ((Sweep Time) / (Burst Width))
= 37.59 mV x (404.92 ms / 392.88 ms)
= 38.74 mV

Frequency [GHz]	Test Distance [meters]	EUT Peak Voltage from DSO [mV]	Equivalent Substitution Power [dBm]	Substitution Rx Antenna Gain [dBi]	Substitution System Loss [dB]	Calculated Peak EIRP [dBm]	Peak EIRP Limit [dBm]	Margin [dB]	Pass/Fail
60.50	0.60	70.82	-16.59	24.00	-23.68	-0.64	43.00	-43.64	Pass

Table 6-2. Peak EIRP Calculation via Substitution (Mode 1)

Frequency [GHz]	Test Distance [meters]	EUT Average Voltage from DSO [mV]	Equivalent Substitution Power [dBm]	Substitution Rx Antenna Gain [dBi]	Substitution System Loss [dB]	Calculated Average EIRP [dBm]	Average EIRP Limit [dBm]	Margin [dB]	Pass/Fail
60.50	0.60	38.74	-18.23	24.00	-23.68	-2.27	40.00	-42.27	Pass

Table 6-3. Average EIRP Calculation via Substitution (Mode 1)

6.5 Peak Conducted Output Power

§15.255(e); RSS-210 Annex J.3.3.d

Test Overview

EUT peak conducted output power must be calculated to compare to the according limits.

For devices with an emission badwidth greater than or equal to 100MHz, the peak transmitter output power shall not exceed 500mW. For devices with an emission bandwidth less than 100 MHz, the peak transmitter output power shall be less than the product of 500 mW and their emission bandwidth divided by 100MHz.

Test Procedure Used

ANSI C63.10-2020 Section 9.2.2

Test Settings

1. EBW (6dB BW) is measured using the procedure outlined in Section 6.2 of this test report
2. Peak EIRP is measured using the procedure outlined in Section 6.4 of this test report
3. Peak Conducted Output Power is calculated from Peak EIRP
4. Peak Conducted Output Power is compared to the according limit

Test Notes

1. All modes of operation were investigated and the worst case configuration results are reported in this section

Sample Calculations

Calculating Conducted Output Power from EIRP:

$$\mathbf{EIRP} = P_{cond} + G_{EUT}$$

Where:

EIRP	is the equivalent isotropically radiated power, in dBm
P_{cond}	is the measured power at feedpoint of the EUT antenna, in dBm
G_{EUT}	is the gain of the EUT radiating element (antenna), in dBi

Transmission Mode	Frequency [GHz]	Peak EIRP [dBm]	EUT Antenna Gain [dBi]	Peak Conducted Output Power [dBm]	Peak Conducted Output Power [mW]	Measured 6dB BW [MHz]	Peak Conducted Output Power Limit [mW]	Margin [mW]	Pass/Fail
1	60.50	-0.64	-1.90	1.26	1.338	646.70	500.00	-498.66	Pass

Table 6-4. Peak Conducted Output Power Calculation

6.6 Radiated Spurious Emissions (Above 40GHz)

§15.255(d); RSS-210 Annex J.4.c

Test Overview

The spectrum is scanned from 40 GHz to 200 GHz for spurious and harmonic emissions. All out of band emissions are measured in a radiated test setup while the EUT is operating at its maximum duty cycle, at maximum power, and at the appropriate frequencies. All modes of operation were investigated and the worst case configuration results are reported in this section.

Frequency Range [GHz]	Emission Limit [pW/cm^2]	Emission Limit Distance [Meters]
40 - 200	90	3

Table 6-5. Emission Limits for 40GHz to 200GHz

Test Procedure Used

ANSI C63.10-2020 Section 9.6, 9.7, and 9.10

Test Settings

1. Start frequency was set to 40GHz and stop frequency was set to 200GHz. Several plots are used to show investigations over this entire frequency span.
2. RBW = 1MHz
3. VBW = 3MHz
4. Detector = Peak
5. Trace mode = Max Hold
6. Sweep time = auto couple
7. Number of sweep points ≥ 2 x Span/RBW
8. The trace was allowed to stabilize

Test Setup

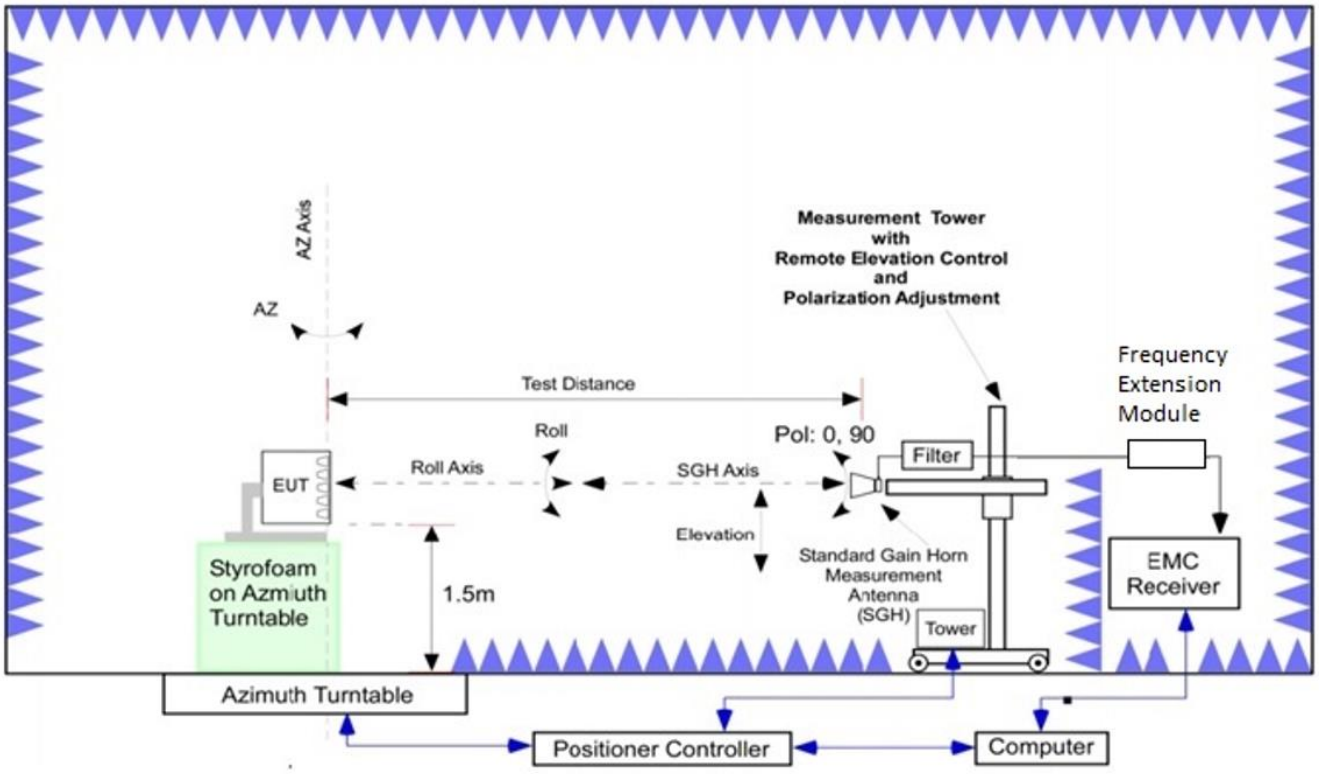


Figure 6-3. Radiated Spurious Emissions Measurement Test Setup (Above 40GHz)

Test Notes

1) All modes of operation were investigated and the worst case configuration results are reported in this section.

2) To be conservative, Peak Detector was used for testing to yield worst case emission results. Any marginal emissions were evaluated with Average Detector for final measurement.

3) Emissions above 40GHz were measured using horn antenas, harmonic mixers, and a spectrum analyzer supporting external mixer configurations.

4) Radiated Spurious Emissions Above 40GHz were measured as RSE EIRP (in dBm) and afterwards converted to Power Density (PD) to compare with the according §15.255 emission limits. The RSE EIRP level is taken directly from the spectrum analyzer which includes the appropriate antenna factors, distance corrections, cable losses, and harmonic mixer conversion losses.

5) Emissions above 40GHz were measured in the far field. The far field distance is based on the formula: R > 2D^2/wavelength, where D is the larger between the dimension of the measurement antenna and the transmitting antenna of the EUT. In this case, D is the largest dimension of the measurement antenna.

Frequency Range [GHz]	Wavelength [centimeters]	Farfield Distance [meters]	Measurement Distance [meters]
40 - 57	0.526	0.99	1.00
71 - 90	0.333	0.71	1.00
90 - 140	0.214	0.54	1.00
140 - 200	0.150	0.32	1.00

Table 6-6. Far-Field Distance & Measurement Distance Per Frequency Range

6) The "-" shown in the following RSE tables are used to denote a noise floor measurement.

Sample Calculations:

Calculating EIRP from Field Strength:

$$\textbf{RSE EIRP}_{[dBm]} = 21.98 - 20\log(\lambda) + 20\log(D_{measured}) + P - G$$

Where:

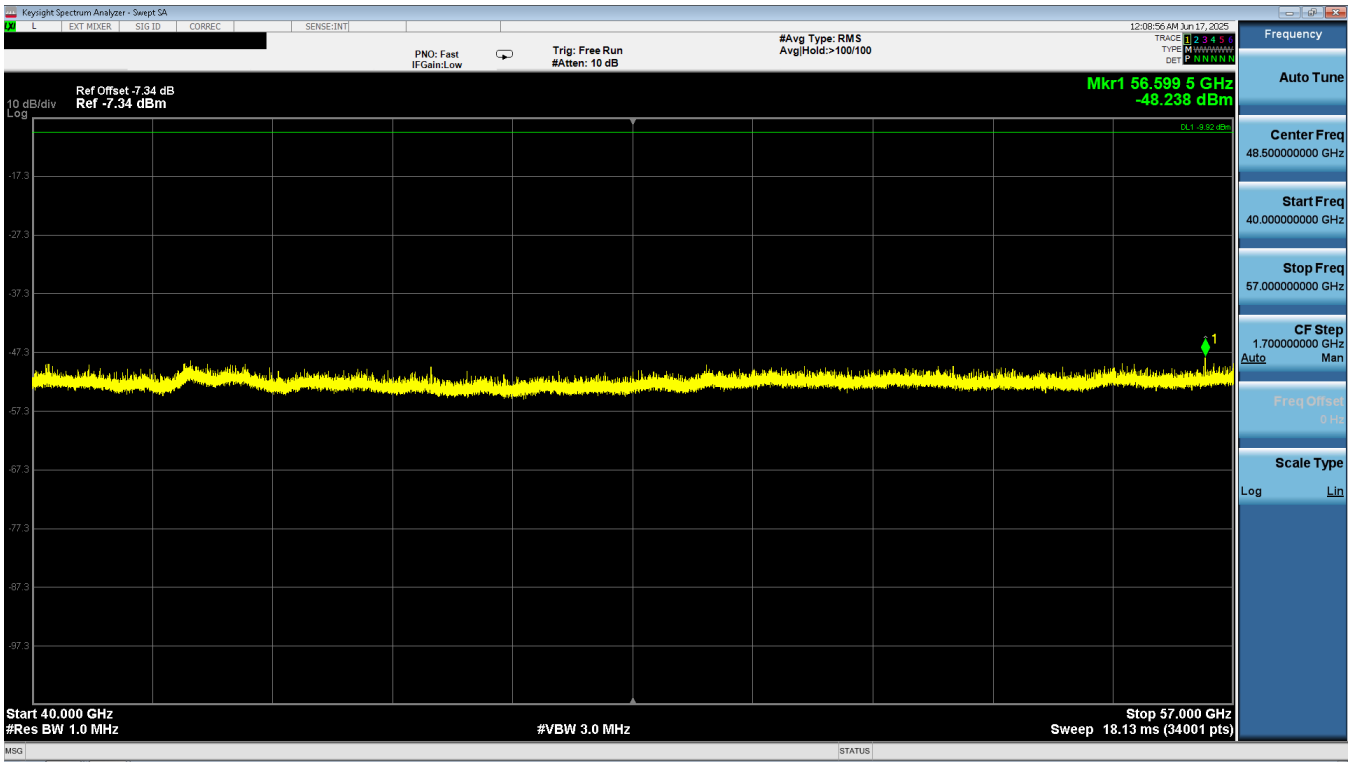
EIRP	is the equivalent isotropic radiated power in dBm
λ	is the wavelength of the emission under investigation [300 / f_{MHz}], in m
$D_{measured}$	is the measurement distance in meters
P	is the power measured at the output of the test antenna, in dBm ; where
G	is the gain of the test antenna, in dBi

Calculating Power Density from EIRP:

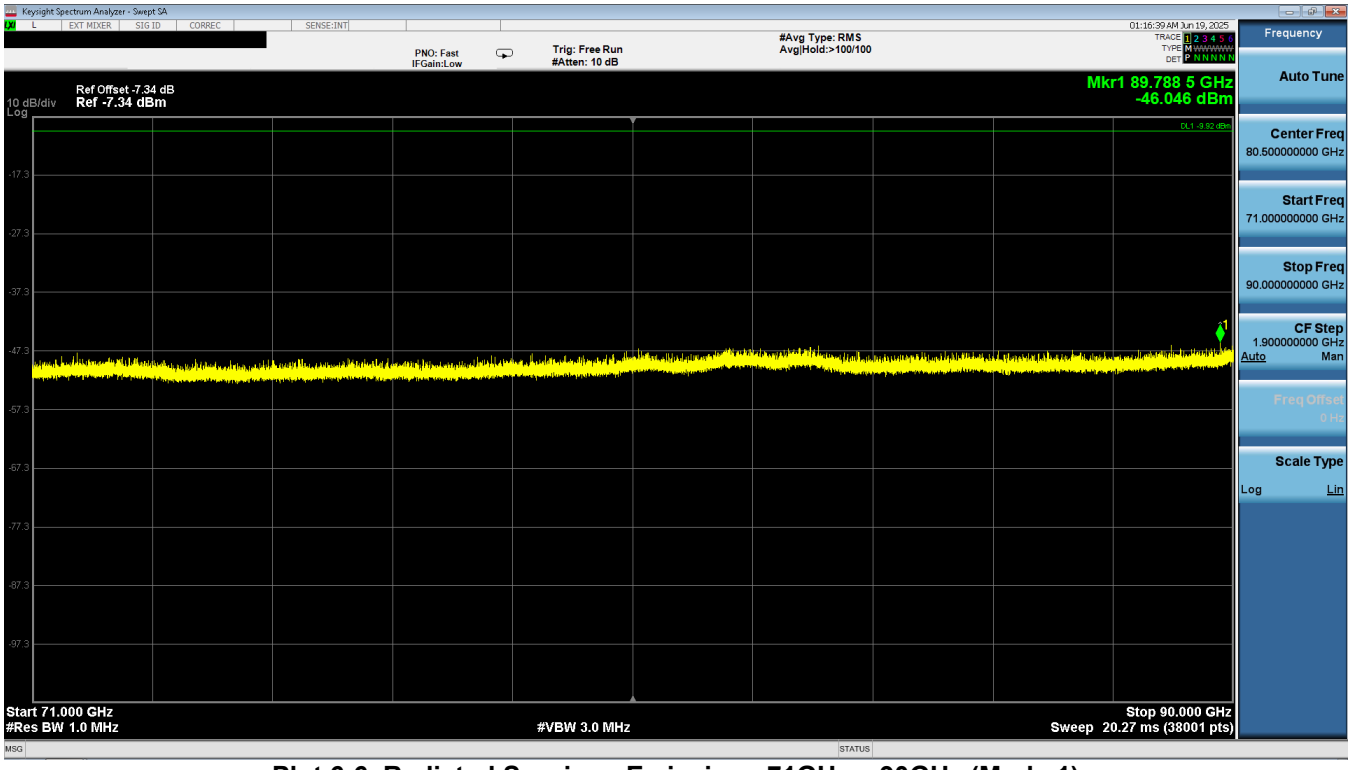
$$\textbf{PD} = EIRP_{linear} / (4\pi D^2)$$

Where:

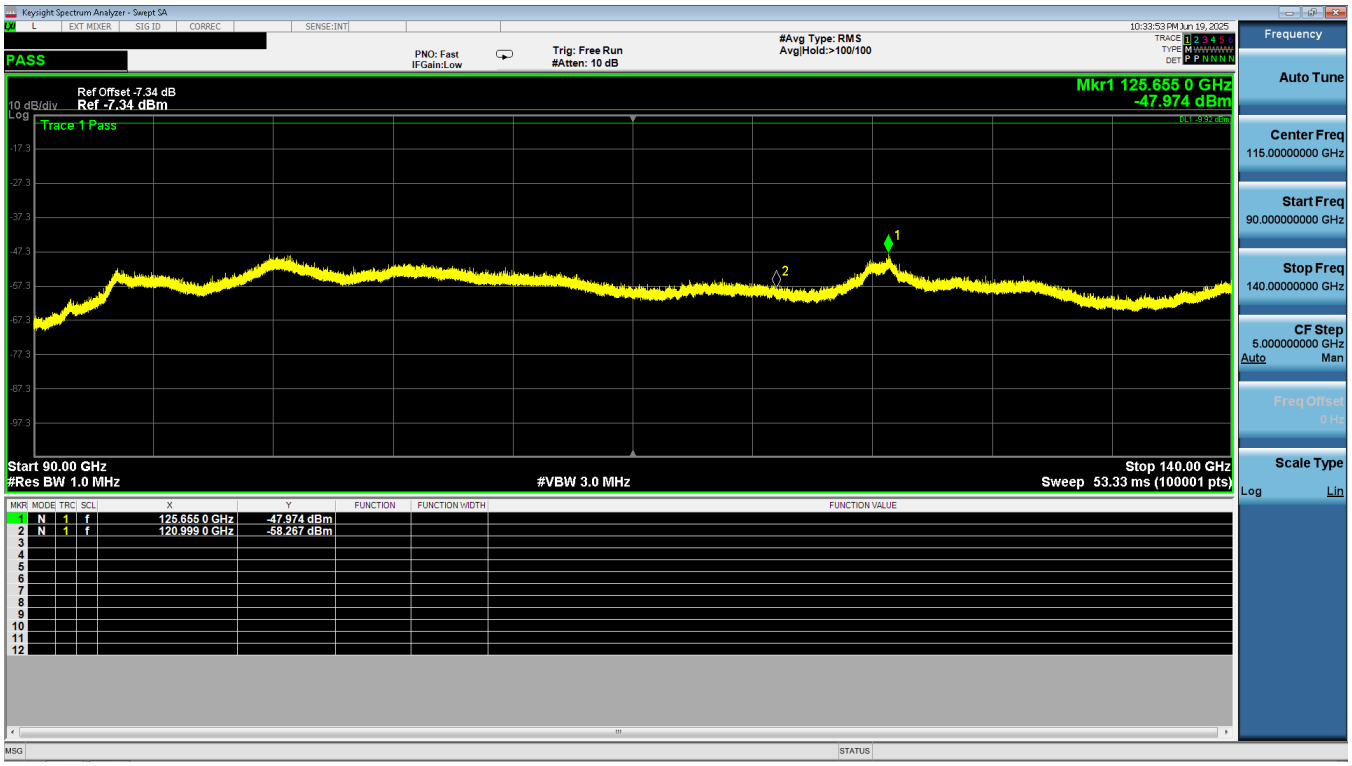
PD	is the power density at the distance specified by the limit, in W/m^2
$EIRP_{linear}$	is the equivalent isotropc radiated power, in Watts
D	is the distance at which the power density limit is specified, in meters



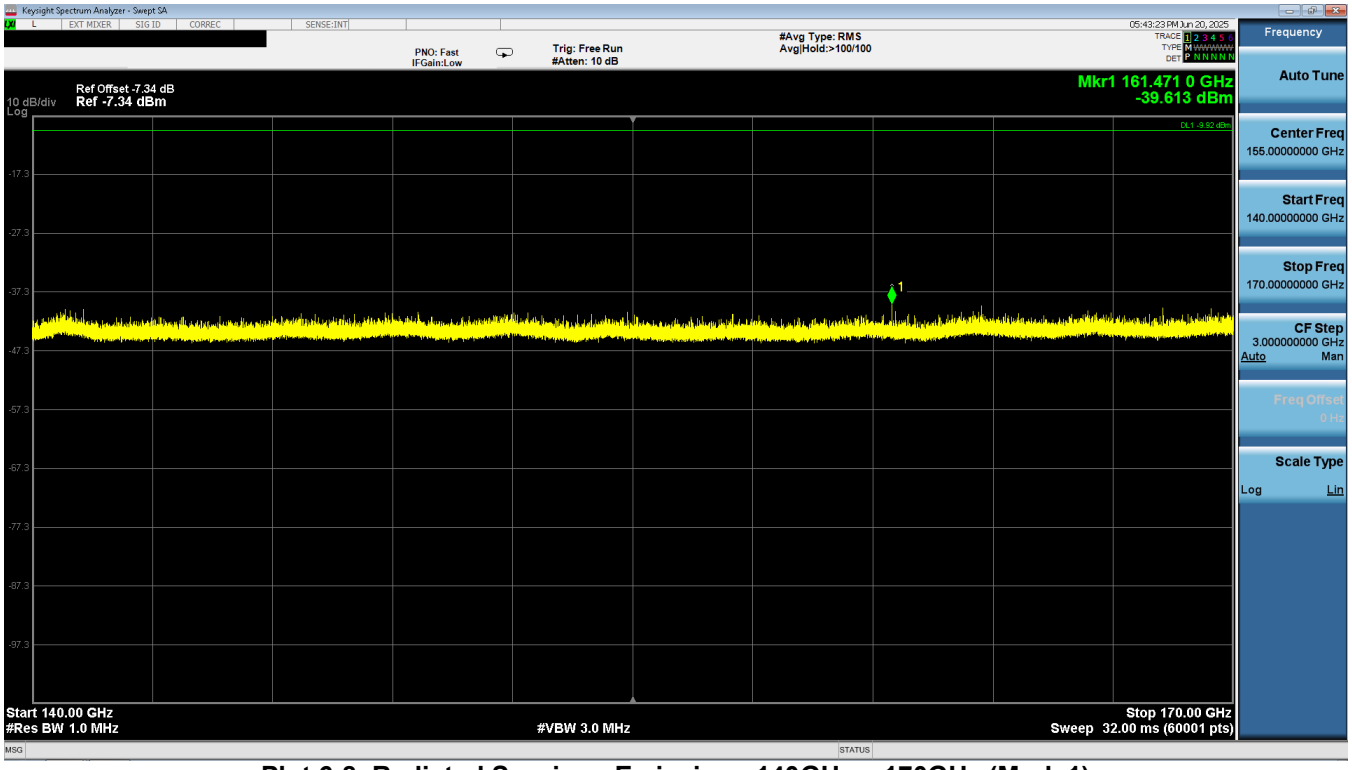
Plot 6-5. Radiated Spurious Emissions 40GHz – 57GHz (Mode 1)



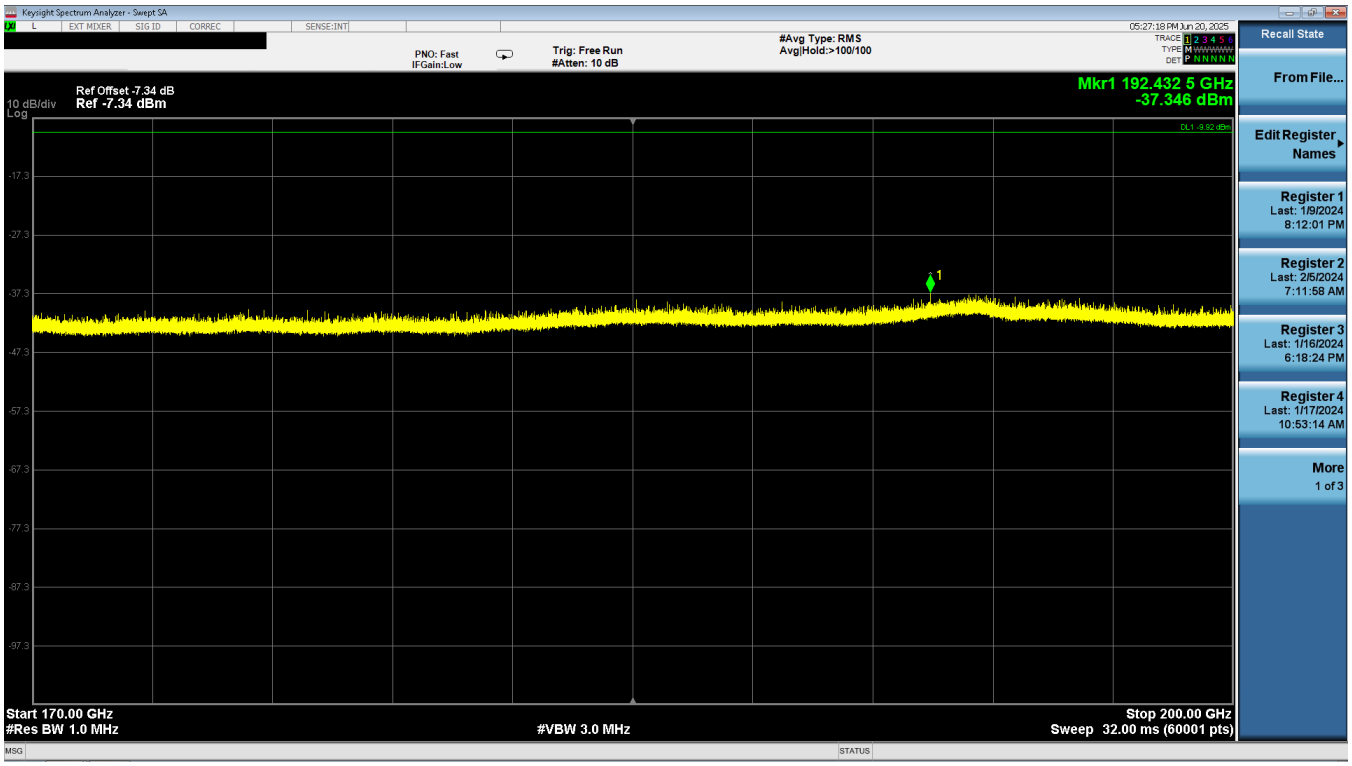
Plot 6-6. Radiated Spurious Emissions 71GHz – 90GHz (Mode 1)



Plot 6-7. Radiated Spurious Emissions 90GHz – 140GHz (Mode 1)



Plot 6-8. Radiated Spurious Emissions 140GHz – 170GHz (Mode1)



Plot 6-9. Radiated Spurious Emissions 170GHz – 200GHz (Mode 1)

Transmission Mode	Frequency [GHz]	Polarity [H/V]	Positioner Azimuth [degrees]	Turntable Azimuth [degrees]	Test Distance (m)	EIRP Emission Level at 3 meters [dBm]	Power Density Level at 3 meters [pW/cm^2]	Power Density Limit at 3 meters [pW/cm^2]	Margin [pW/cm^2]	Pass/Fail
1	56.600	V	3	54	1	-45.387	0.023	90.000	-89.977	PASS
1	89.789	V	-	-	1	-46.046	0.020	90.000	-89.980	PASS
1	120.999	V	26	258	1	-51.797	0.005	90.000	-89.995	PASS
1	125.655	V	-	-	1	-47.974	0.013	90.000	-89.987	PASS
1	161.471	V	-	-	1	-39.613	0.087	90.000	-89.913	PASS
1	192.433	V	-	-	1	-37.346	0.147	90.000	-89.853	PASS

Table 6-7. Radiated Spurious Emissions Measurements (40GHz – 200GHz)

6.7 Radiated Spurious Emissions (1GHz – 40GHz)

§15.247(d) §15.205 & §15.209; RSS-Gen [8.9]

Test Overview and Limit

All out of band radiated spurious emissions are measured with a spectrum analyzer connected to a receive antenna while the EUT is operating at its maximum duty cycle, at maximum power, and at the appropriate frequencies. All data rates and modes were investigated for radiated spurious emissions. Only the radiated emissions of the configuration that produced the worst case emissions are reported in this section.

All out of band emissions appearing in a restricted band as specified in Section 15.205 of the Title 47 CFR and Table 7 of RSS-Gen (8.10) must not exceed the limits shown in Table 6-8 per Section 15.209 and RSS-Gen (8.9).

Frequency [MHz]	Field Strength [µV/m]	Measured Distance [Meters]
960 – 40,000	500	3

Table 6-8. Radiated Limits

Test Procedures Used

ANSI C63.10-2020 Section 9.11

Test Settings

Average Field Strength Measurements

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW = 3MHz
4. Detector = power average (RMS)
5. Number of measurement points must be ≥ 2 x span/RBW
6. Sweep time = auto
7. Trace (RMS) averaging was performed over at least 100 traces

Peak Field Strength Measurements

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW = 3MHz
4. Detector = peak
5. Number of measurement points must be ≥ 2 x span/RBW
6. Sweep time = auto couple
7. Trace mode = max hold
8. Trace was allowed to stabilize over at least 100 traces

Test Setup

The EUT and measurement equipment were set up as shown in the diagram below.

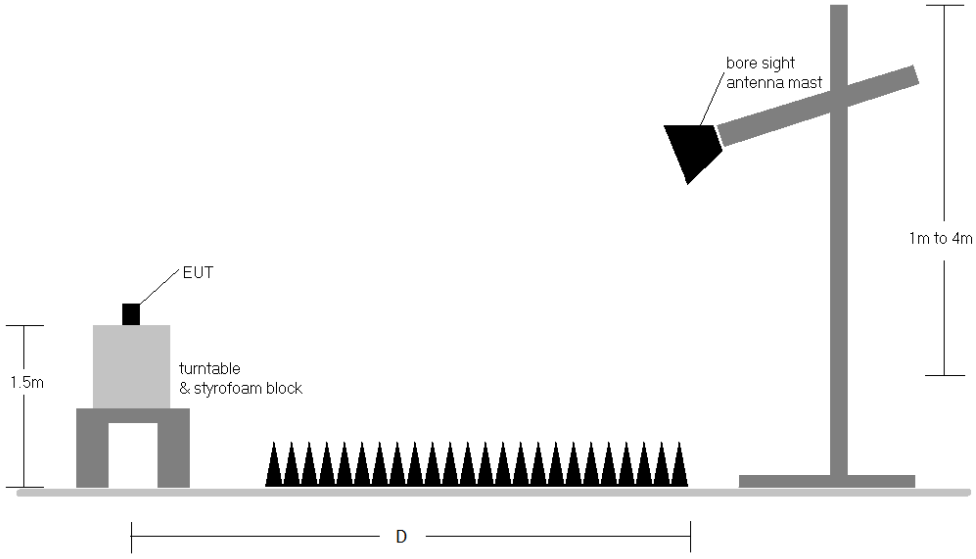


Figure 6-4. Radiated Spurious Emissions Measurement Test Setup (1GHz - 18GHz)

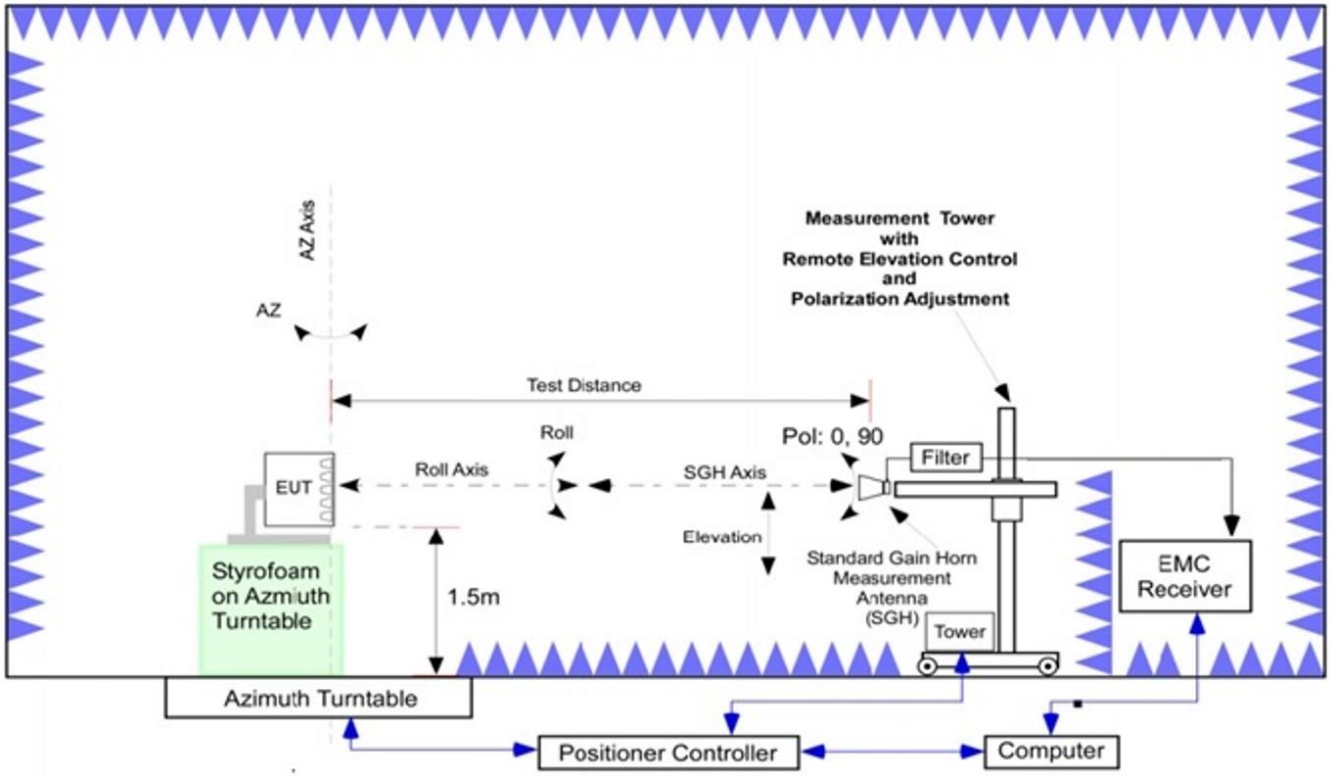


Figure 6-5. Radiated Spurious Emissions Measurement Test Setup (18GHz - 40GHz)

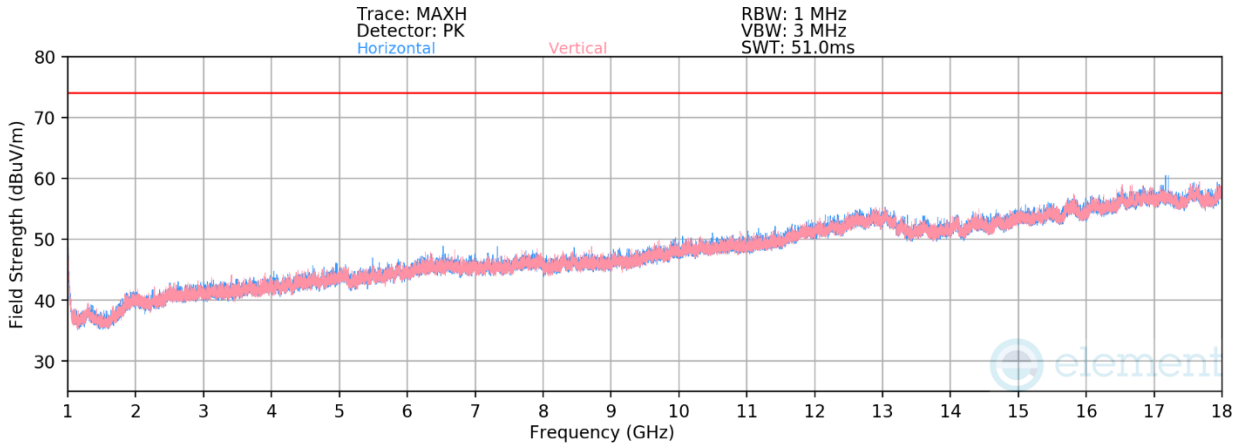
Test Notes

1. All emissions lying in restricted bands specified in Section 15.205 and Section 8.10 of RSS-Gen are below the limit shown in Table 6-8.
2. The antenna is manipulated through typical positions, polarity and height during the tests. The EUT is manipulated through three orthogonal planes.
3. Emissions 1GHz - 18GHz were measured at a 3 meter test distance (D = 3m) while emissions 18GHz – 40GHz were measured at a 1 meter test distance (D = 1m) with the application of a distance correction factor.
4. The wide spectrum spurious emissions plots shown on the following pages are used only for the purpose of emission identification. Any emissions found to be within 20dB of the limit are fully investigated and the results are shown in this section.
5. The "-" shown in the following RSE tables are used to denote a noise floor measurement.
6. The unit was tested with all possible modes and only the highest emission is reported.

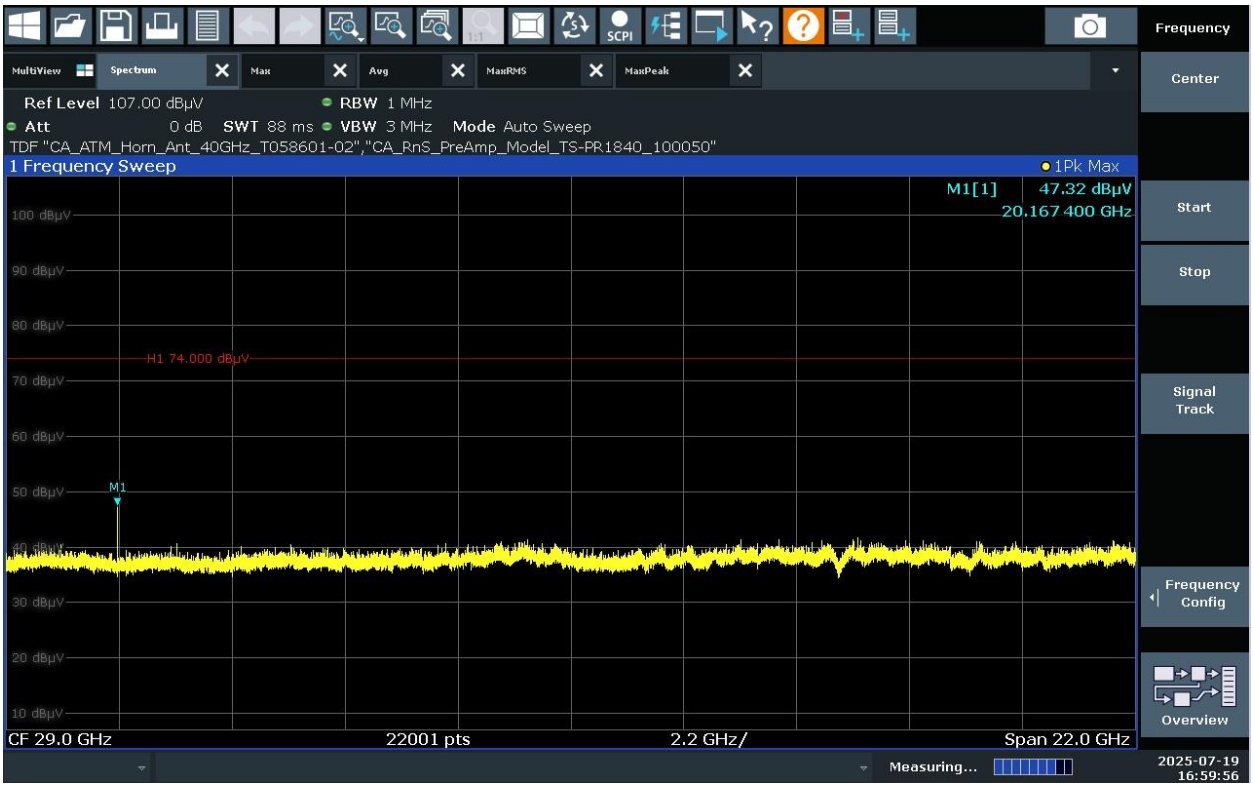
Sample Calculations

Determining Spurious Emissions Levels

- Field Strength Level $_{[dB\mu V/m]}$ = Analyzer Level $_{[dBm]}$ + 107 + AFCL $_{[dB/m]}$
- AFCL $_{[dB/m]}$ = Antenna Factor $_{[dB/m]}$ + Cable Loss $_{[dB]}$ – Preamplifier Gain $_{[dB]}$
- Margin $_{[dB]}$ = Field Strength Level $_{[dB\mu V/m]}$ – Limit $_{[dB\mu V/m]}$



Plot 6-10. Radiated Spurious Emissions 1GHz – 18GHz (Mode 1)



Plot 6-11. Radiated Spurious Emissions 18GHz – 40GHz (Mode 1)

Transmission Mode	Frequency [GHz]	Detector	Polarity [H/V]	Positioner Azimuth [degrees]	Turntable Azimuth [degrees]	Analyzer Level [dBm]	AFCL [dB]	Field Strength Level at 3 meters [dBµV/m]	Field Strength Limit at 3 meters [dBµV/m]	Margin [dB]	Pass/Fail
1	20.167	Avg	V	87	268	-56.93	-6.21	43.86	53.98	-10.12	PASS
1	20.167	Peak	V	87	268	-52.87	-6.21	47.92	73.98	-26.06	PASS

Table 6-10. Radiated Spurious Emission Measurements (18GHz – 40GHz)

6.8 Radiated Spurious Emissions (Below 1GHz)

§15.209; RSS-Gen [8.9]

Test Overview and Limit

All out of band radiated spurious emissions are measured with a spectrum analyzer connected to a receive antenna while the EUT is operating at its maximum duty cycle, at maximum power, and at the appropriate frequencies. All data rates and modes were investigated for radiated spurious emissions. Only the radiated emissions of the configuration that produced the worst case emissions are reported in this section.

All out of band emissions appearing in a restricted band as specified in Section 15.205 of the Title 47 CFR and Table 7 of RSS-Gen (8.10) must not exceed the limits shown in Table 6-11 per Section 15.209 and RSS-Gen (8.9).

Frequency	Field Strength [µV/m]	Measured Distance [Meters]
0.009 – 0.490 MHz	2400/F (kHz)	300
0.490 – 1.705 MHz	24000/F (kHz)	30
1.705 – 30.00 MHz	30	30
30.00 – 88.00 MHz	100	3
88.00 – 216.0 MHz	150	3
216.0 – 960.0 MHz	200	3
Above 960.0 MHz	500	3

Table 6-11. Radiated Limits

Test Procedures Used

ANSI C63.10-2020 Section 6.5

Test Settings

Quasi-Peak Field Strength Measurements

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 120kHz (for emissions from 30MHz – 1GHz)
3. Detector = quasi-peak
4. Sweep time = auto couple
5. Trace mode = max hold
6. Trace was allowed to stabilize

Peak Field Strength Measurements

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 120kHz (for emissions from 30MHz – 1GHz)
3. VBW = 300kHz
4. Detector = peak
5. Sweep time = auto couple
6. Trace mode = max hold

Test Setup

The EUT and measurement equipment were set up as shown in the diagrams below.

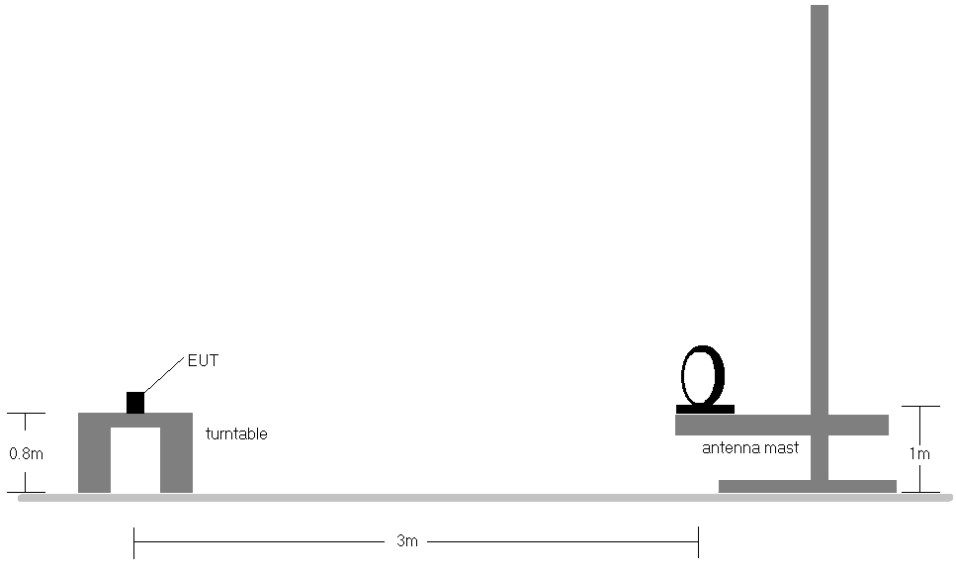


Figure 6-6. Radiated Test Setup (9kHz – 30MHz)

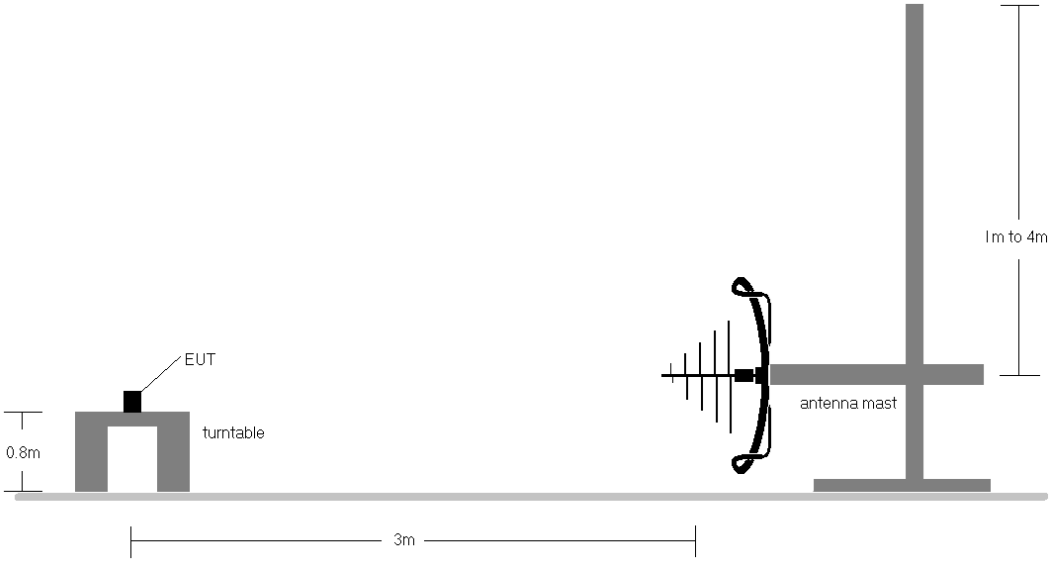
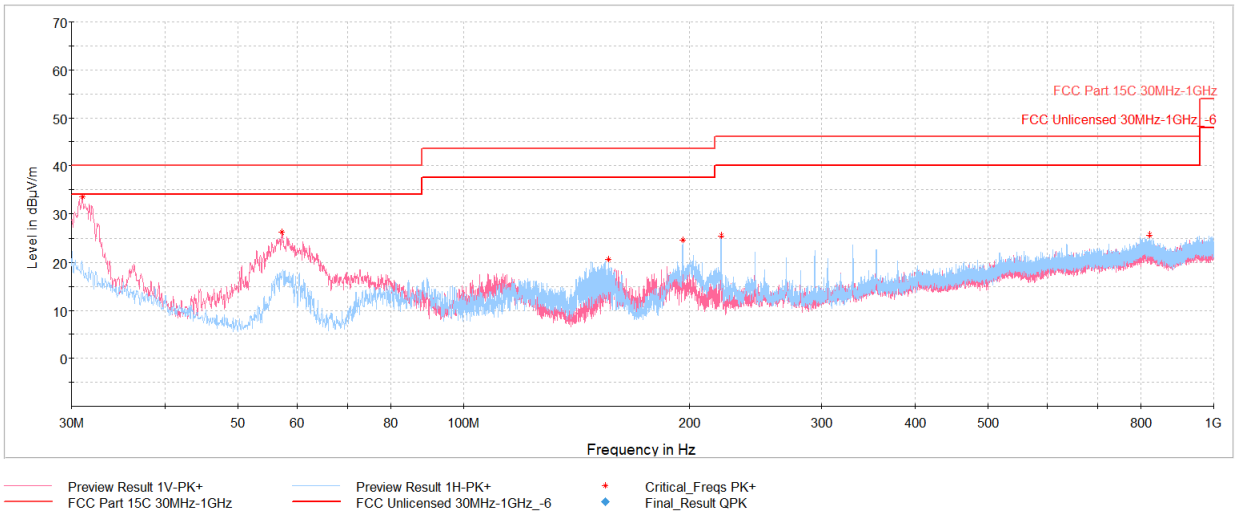


Figure 6-7. Radiated Test Setup (30MHz – 1GHz)

Test Notes

1. All emissions lying in restricted bands specified in §15.205 and RSS-Gen(8.10) are below the limit shown in Table 6-11.
2. The broadband receive antenna is manipulated through vertical and horizontal polarizations during the tests. The EUT is manipulated through three orthogonal planes. For below 30MHz measurements, the loop antenna was positioned in three orthogonal planes (X front, Y side, and Z top) to determine the orientation resulting in the worst case emissions.
3. The spectrum is investigated using a peak detector and final measurements are recorded using CISPR quasi peak detector for emissions within 6dB of the limit.
4. Emissions were measured at a 3 meter test distance.
5. Emissions are investigated while operating on the modulation and data rate that produced the worst case results during the transmitter spurious emissions testing.
6. No spurious emissions were detected within 20dB of the limit below 30MHz.
7. The results recorded using the broadband antenna is known to correlate with the results obtained by using a tuned dipole with an acceptable degree of accuracy. The VSWR for the measurement antenna was found to be less than 2:1.
8. The following configuration below was used for testing:
    a. EUT powered by host Laptop via USB-C cable
9. The unit was tested with all possible modes and only the highest emission is reported.



Plot 6-12. Radiated Spurious Emissions 30MHz – 1GHz (Mode 1, with Host Laptop via USB-C Cable)

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
31.02	Max-Peak	V	100	243	-57.46	-16.00	33.54	40.00	-6.46
57.31	Max-Peak	V	100	0	-58.41	-22.47	26.12	40.00	-13.88
155.76	Max-Peak	H	200	337	-68.07	-18.34	20.59	43.52	-22.93
195.73	Max-Peak	H	100	224	-64.08	-18.23	24.69	43.52	-18.83
220.17	Max-Peak	H	100	203	-64.40	-17.19	25.41	46.02	-20.61
820.60	Max-Peak	H	200	142	-78.07	-3.33	25.60	46.02	-20.42

Table 6-12. Radiated Spurious Emissions 30MHz – 1GHz (Mode 1, with Host Laptop via USB-C Cable)

6.9 Frequency Stability

§15.255(f); RSS-210 Annex J.6

Test Overview and Limit

Frequency stability testing is performed in accordance with the guidelines of ANSI C63.10-2020 Subclause 9.5. The frequency stability of the transmitter is measured whilst varying the following operating conditions:

a) **Temperature:** The temperature is varied from -20°C to +50°C in 10°C increments using an environmental temperature chamber at nominal supply voltage.

b) **Primary Supply Voltage:** The primary supply voltage is varied from 85% to 115% of the rated input voltage for non hand-carried battery and AC powered equipment. For hand-carried, battery-powered equipment, primary supply voltage is reduced to the battery operating end point which shall be specified by the manufacturer.

Fundamental emissions must be contained within the frequency bands specified in the according rule parts (57 – 71 GHz) during all conditions of operation.

Test Procedure Used

ANSI C63.10-2020 Subclause 9.5

Test Settings

1. The spectrum mask of the EUT emission is measured at ambient room temperature and nominal operating voltage (100%) to provide a reference. The spectrum mask of the EUT emission is defined by frequency measurements taken at the lower and upper regions of the fundamental emission (F_{low} and F_{high}).

2. EUT primary supply voltage is varied between 85% and 115% of the nominal supply voltage (at room temperature). Frequency excursion of the EUT emission mask is recorded at each of these conditions.

3. With primary supply voltage set to the nominal value, EUT operating temperature is increased to +50°C using an environmental chamber. Frequency excursion of the EUT emission mask is recorded.

4. EUT operating temperature is decreased by 10°C intervals until reaching -20°C. Frequency excursion of the EUT emission mask is recorded at each temperature condition.

Test Setup

The EUT was measured using horn antenna connected to a spectrum analyzer. The EUT was placed inside an environmental chamber. Using a foam plug, the horn antenna measured the frequency of the fundamental signal.

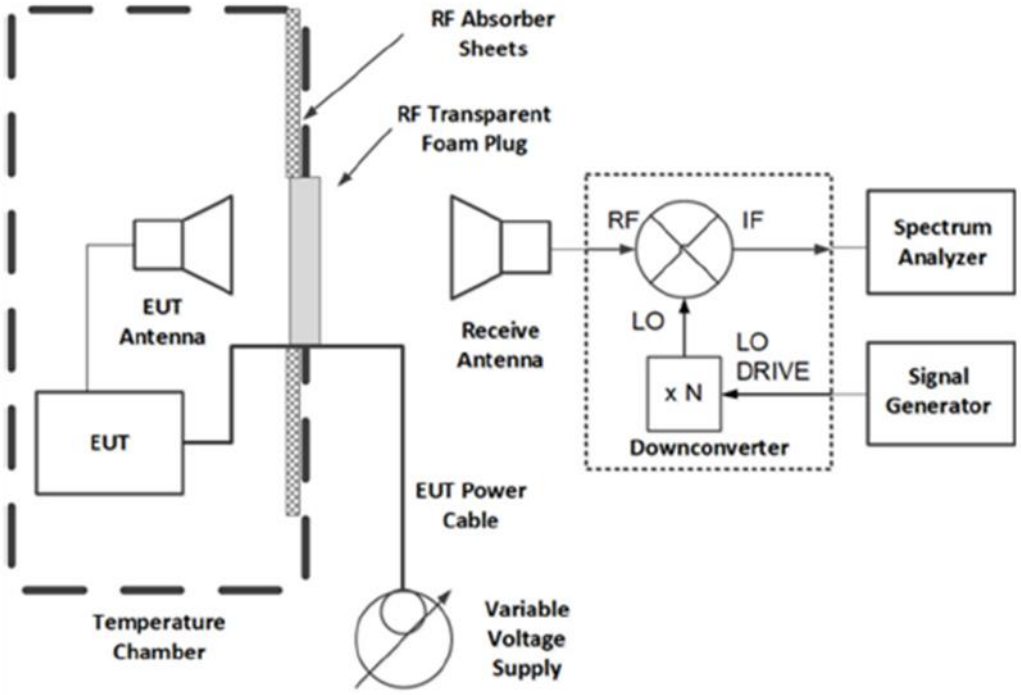


Figure 6-8. Frequency Stability Test Instrument & Measurement Setup

Test Notes

1. All modes of operation were investigated and only worst case results are reported.

Test Conditions	Transmitter Frequency Range [GHz]		Pass/Fail
	f_{Low}	f_{High}	
-20 deg C / V_{nom}	58.6644	62.1157	Pass
-10 deg C / V_{nom}	58.4180	62.1420	Pass
0 deg C / V_{nom}	59.0641	61.8119	Pass
+10 deg C / V_{nom}	58.5080	61.7194	Pass
+20 deg C / V_{nom}	59.2041	61.4263	Pass
+30 deg C / V_{nom}	58.3429	62.1354	Pass
+40 deg C / V_{nom}	58.2804	61.8454	Pass
+50 deg C / V_{nom}	58.8533	62.2671	Pass
+20 deg C / 85% voltage	58.8508	62.1341	Pass
+20 deg C / 115% voltage	59.0597	61.8464	Pass

Table 6-13. Frequency Stability Measurements (Mode 1)

6.10 AC Line Conducted Emissions Measurements

§15.207; RSS-Gen [8.8]

Test Overview and Limit

All AC line conducted spurious emissions are measured with a receiver connected to a grounded LISN while the EUT is operating at its maximum duty cycle, at maximum power, and at the appropriate frequencies. All data rates and modes were investigated for AC Line conducted spurious emissions. Only the conducted emissions of the configuration that produced the worst case emissions are reported in this section.

All conducted emissions must not exceed the limits shown in the table below, per Section 15.207 and RSS-Gen (8.8).

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

Table 6-14. Conducted Limits

*Decreases with the logarithm of the frequency.

Test Procedures Used

ANSI C63.10-2020 Section 6.2

Test Settings

Quasi-Peak Measurements

1. Analyzer center frequency was set to the frequency of the spurious emission of interest
2. RBW = 9kHz (for emissions from 150kHz – 30MHz)
3. Detector = quasi-peak
4. Sweep time = auto couple
5. Trace mode = max hold
6. Trace was allowed to stabilize

Average Measurements

1. Analyzer center frequency was set to the frequency of the spurious emission of interest
2. RBW = 9kHz (for emissions from 150kHz – 30MHz)
3. Detector = RMS
4. Sweep time = auto couple
5. Trace mode = max hold
6. Trace was allowed to stabilize

Test Setup

The EUT and measurement equipment were set up as shown in the diagram below.

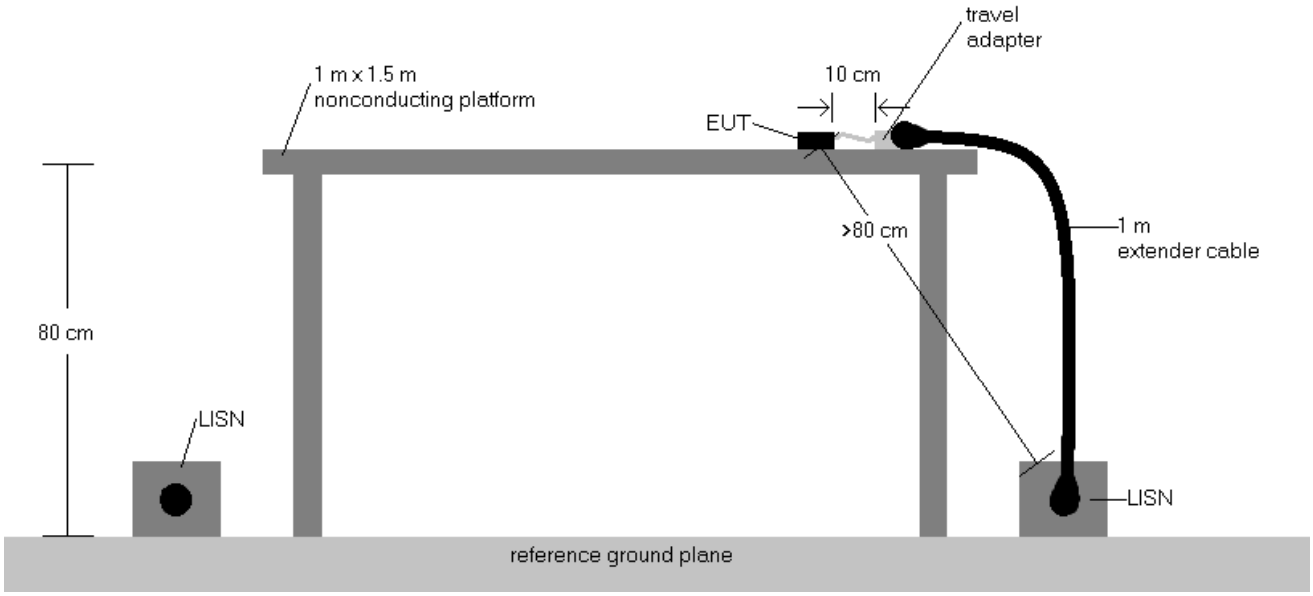
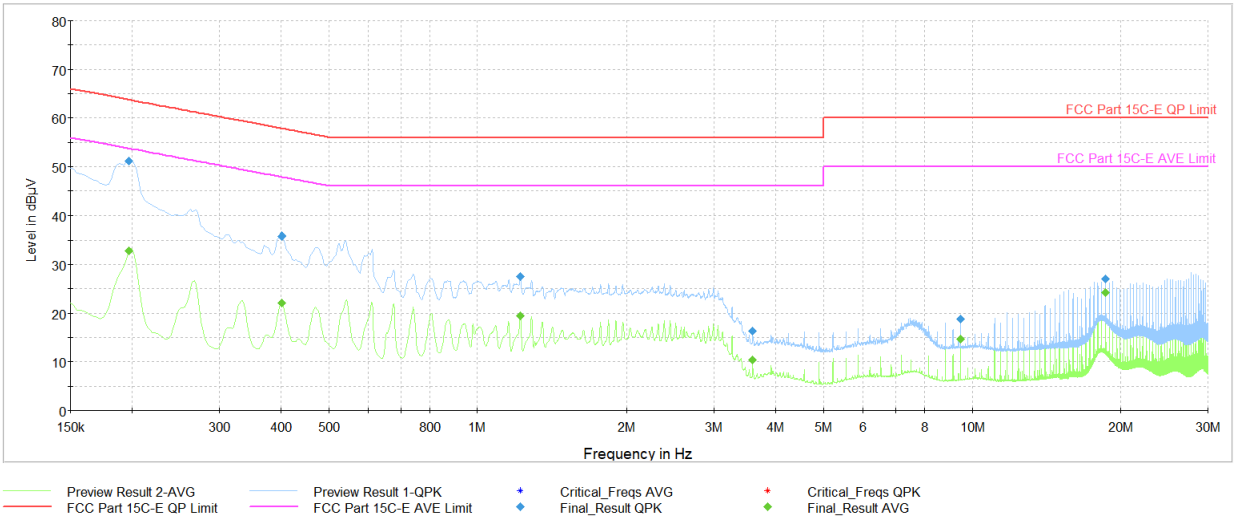


Figure 6-9. AC Line Conducted Test Instrument & Measurement Setup

Test Notes

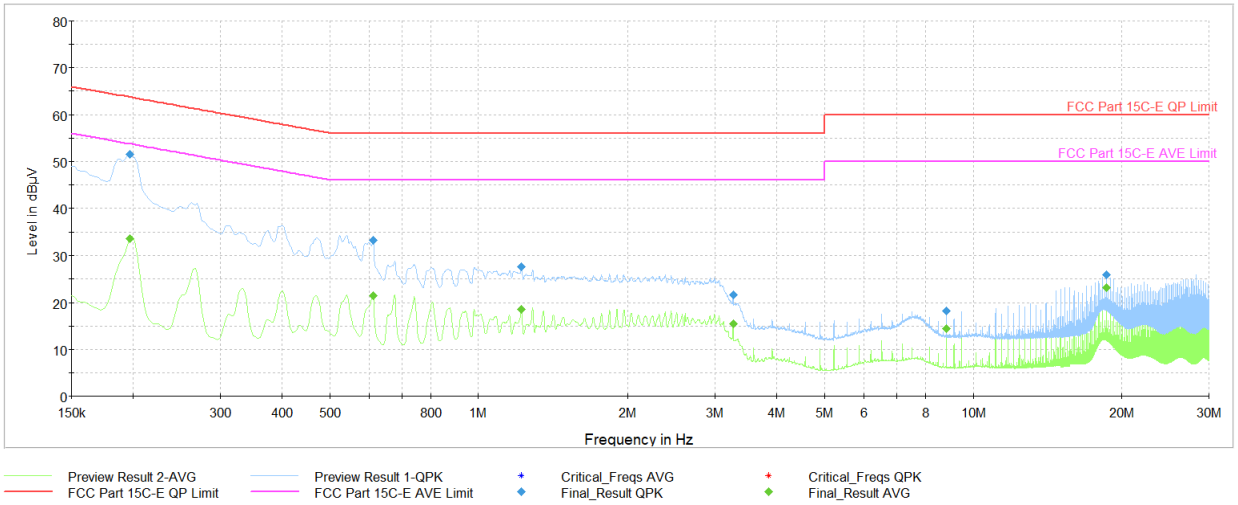
1. All modes of operation were investigated for AC line conducted spurious emissions and the worst-case emissions are reported.
2. The limit for an intentional radiator from 150kHz to 30MHz are specified in Part 15.207 and RSS-Gen(8.8).
3. Corr. (dB) = Cable loss (dB) + LISN insertion factor (dB)
4. QP/AV Level (dBμV) = QP/AV Analyzer/Receiver Level (dBμV) + Corr. (dB)
5. Margin (dB) = QP/AV Level (dBμV) - QP/AV Limit (dBμV)
6. Traces shown in plot are made using quasi-peak and average detectors.
7. Deviations to the Specifications: None.
8. The following configuration below was used for testing:
    a. EUT powered by host Laptop via USB-C cable
9. The unit was tested with all possible modes and only the highest emission is reported.



Plot 6-13. AC Line Conducted Plot (L1 - Mode 1, with Host Laptop via USB-C Cable)

Frequency [MHz]	Process State	QuasiPeak [dBµV]	Average [dBµV]	Limit [dBµV]	Margin [dB]	Line	PE
0.197	FINAL	—	32.80	53.73	-20.93	L1	GND
0.197	FINAL	51.2	—	63.73	-12.53	L1	GND
0.402	FINAL	—	22.10	47.81	-25.71	L1	GND
0.402	FINAL	35.8	—	57.81	-22.05	L1	GND
1.223	FINAL	—	19.47	46.00	-26.53	L1	GND
1.223	FINAL	27.5	—	56.00	-28.50	L1	GND
3.593	FINAL	16.3	—	56.00	-39.71	L1	GND
3.593	FINAL	—	10.34	46.00	-35.66	L1	GND
9.470	FINAL	18.8	—	60.00	-41.18	L1	GND
9.470	FINAL	—	14.61	50.00	-35.39	L1	GND
18.611	FINAL	—	24.21	50.00	-25.79	L1	GND
18.611	FINAL	27.1	—	60.00	-32.95	L1	GND

Table 6-15. AC Line Conducted Data (L1 - Mode 1, with Host Laptop via USB-C Cable)



Plot 6-14. AC Line Conducted Plot (N - Mode 1, with Magnetic Charger & Laptop)

Frequency [MHz]	Process State	QuasiPeak [dBµV]	Average [dBµV]	Limit [dBµV]	Margin [dB]	Line	PE
0.197	FINAL	—	33.71	53.73	-20.01	N	GND
0.197	FINAL	51.5	—	63.73	-12.26	N	GND
0.611	FINAL	—	21.51	46.00	-24.49	N	GND
0.611	FINAL	33.2	—	56.00	-22.77	N	GND
1.223	FINAL	—	18.61	46.00	-27.39	N	GND
1.223	FINAL	27.6	—	56.00	-28.37	N	GND
3.266	FINAL	21.7	—	56.00	-34.35	N	GND
3.266	FINAL	—	15.48	46.00	-30.52	N	GND
8.817	FINAL	18.2	—	60.00	-41.78	N	GND
8.817	FINAL	—	14.48	50.00	-35.52	N	GND
18.611	FINAL	—	23.15	50.00	-26.85	N	GND
18.611	FINAL	26.0	—	60.00	-34.03	N	GND

Table 6-16. AC Line Conducted Data (N - Mode 1, with Magnetic Charger & Laptop)

7.0 CONCLUSION

The data collected relate only to the item(s) tested and show that the **Apple Watch FCC ID: BCG-A3335** and **IC: 579C-A3335** is in compliance with Part 15 Subpart C (15.255) of the FCC Rules and RSS-210 Annex J of the Innovation, Science, and Economic Development of Canada Rules.