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ACCREDITED
TESTING CERT#2750.01

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EMC testing of the Tektelic Communication Inc. Kona Mega Gen3 Gateway in accordance with FCC Part 15.247and ANSI C63.10 as referenced by FCC OET KDB 558074 D01 15.247 Meas Guidance v05r02.

FCC ID: 2ALEPT0009468

Test Dates: August 14, 15 &17, 2026

Test Personnel: Joseph Yumol

Prepared for: Tektelic Communication Inc.
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REVISION RECORD

ISSUE	DATE	AUTHOR	REVISIONS(Description)
DRAFT 1	2026-08-20	I. Akram	Initial draft submitted for review.
DRAFT 2	2026-08-24	I. Akram	Added EUT Model#, Serial# and antenna information in section 1.3.
Release 1	2026-08-31	I. Akram	Sign Off
Release 2	2026-09-04	I. Akram	Corrected typo in summary table test case 2.3 specification column and section 2.5 numbering. Added POE injector CE testing statement in Section 2.1.4. Added conducted output power compliance statement under §15.247(b)(4) requirements for 8dBi antenna in section 1.3 & 2.3.5 notes. Sign Off

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1.0 INTRODUCTION

1.1 Scope

The purpose of this report is to present the results of compliance testing performed in accordance with FCC Part 15.247 and ANSI C63.10 to gain FCC new Authorization for Low-Power License-Exempt transmitters. All test procedures, limits, criteria, and results described in this report apply only to the Tektelic Communication Inc. Kona Mega Gen3 Gateway test sample, referred to herein as the EUT (Equipment Under Test).

This report does not imply product endorsement by the Electronics Test Centre, A2LA, nor any Canadian Government agency.

1.2 Applicant

This test report has been prepared for Tektelic Communication Inc., located in Calgary, Alberta, Canada.

1.3 Test Sample Description

As provided to ETC (Airdrie) by Tektelic Communication Inc.:

Product Name:	Kona Mega Gen3 Gateway
Radio	LoRa
Frequency Band	902 – 928 MHz
Frequency Range	923 – 928 MHz
Operating Mode	500KHz DTS
Max Transmit Power (Conducted)	27.68 dBm (0.586 W)
Associated Antennas (LoRa)	WTTX-OMNI920-2.5-NJ Antenna Gain:2.5dBi WTTX-OMNI920-6-NJ Antenna Gain: 6dBi WTTX-OMNI920-8-NJ Antenna Gain: 8dBi
Model#	T0009520
Radiated Sample Serial#	2603K0014
Pre-Certified LTE Radio Module FCC ID	RI7LE910CXWWX
Associated Antennas (LTE)	WTTX OMNILTE 2 N J TEC Antenna Gain: 2.0dBi
Power supply:	Power over Ethernet (POE)/ 48VDC

Note: The Kona Mega Gen3 Gateway will be installed on a pole or wall at one fixed axis. Radiated spurious emissions measurements are performed on Low, MID &High channels. The Kona Mega Gen3 Gateway can transmit through either antenna port 0 or antenna port 1. There is no simultaneous transmission through both connected LoRa antennas.
Antenna port analysis/Radiated Spurious emission is performed on both ports. During, radiated spurious emission highest gain antenna (8 dBi) is connected to both ports. According to Tektelic Communications Inc.'s operational description, the maximum conducted output power is 28 dBm to meet§15.247(b)(4) requirements .
The EUT contains the pre-certified LTE radio module. During radiated spurious emissions testing, the LoRa and LTE radios transmit simultaneously to cover the co-location requirements.

1.4 General Test Conditions

The EUT was set up and exercised using the configurations, modes of operation and arrangements defined in this report only. All inputs and outputs to and from other equipment associated with the EUT were adequately simulated. In order to meet the operational requirements during testing as per KDB 558074 D01 15.247 Meas Guidance v05r02 and ANSI C63.10 the device was programmed with a special firmware to transmit at a continuous transmit mode ≥98% duty cycle. Special firmware is strictly for testing purpose only and not available to end user. This special test case represents the worst-case duty cycle. For antenna port conducted emission spectrum analyzer is connected to the antenna ports with appropriate attenuation and measuring cable.

The environmental conditions are recorded during each test, and are reported in the relevant sections of this document.

1.5 Reference Standards

Standards	Description
FCC, title 47 CFR § 15.247	Operation within the bands 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz.
FCC, title 47 CFR § 15.207	Conducted limits for an intentional radiator that is designed to be connected to the public utility (AC) power line.
FCC, title 47 CFR § 15.107	Conducted limits for equipment that is designed to be connected to the public utility (AC) power line.
FCC, title 47 CFR § 15.209	Radiated emission limits; general requirements
FCC, title 47 CFR § 15.109	Radiated emission limits; from unintentional radiators digital devices.
ANSI C63.10-2020 Cor1-2023	American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices
ANSI C63.4-2014 w/ Amend: 2017	American National Standard for Methods of Measurement of Radio – Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the range of 9 KHz to 40 GHz
558074 D01 15.247 Meas Guidance v05r02	Guidance For Compliance Measurements On Digital Transmission System, Frequency Hopping Spread Spectrum System, And Hybrid System Devices Operating Under Section 15.247 Of The FCC Rules

1.6 Test Methodology

Test methods are specified in the Basic Standard as referenced and/or modified by the Product Standard in the part of Section 2 of this report associated with each particular test case. EUT is tested in RX mode to cover FCC part 15 Sub Part B (Digital Circuitry).

1.6.1 Variations in Test Methodology

Any variance in methodology or deviation from the reference Standard is documented in the part of Section 2 of this report associated with each particular Test Case.

1.6.2 Test Sample Verification, Configuration & Modifications

EUT setup, configuration, protocols for operation and monitoring of EUT functions, and any modifications performed in order to meet the requirements, are detailed in each Test Case of Section 2 of this report.

1.6.3 Uncertainty of Measurement:

The factors contributing to measurement uncertainty are identified and calculated in accordance with CISPR 16-4-2: 2011.
This uncertainty estimate represents an expended uncertainty expressed at approximately 95% confidence using a coverage factor of k = 2.

Test Method	Uncertainty
Radiated Emissions Level (9 KHz – 1 GHz)	±5.8 dB
Radiated Emissions Level (1 GHz – 18 GHz)	±4.9 dB
Radiated Emissions Level (18 GHz – 26.5 GHz)	±5.0 dB
Conducted Emissions Level (150 KHz – 30 MHz)	±3.0 dB
Uncertainty Conducted Power level	±0.5 dB
Uncertainty Conducted Spurious emission level	±0.6 dB
Uncertainty for Bandwidth test	±1.5 %

2.0 TEST CONCLUSION

STATEMENT OF COMPLIANCE

The customer equipment referred to in this report was found to comply with the requirements, as summarized below.

The EUT was subjected to the following tests. Compliance status is reported as **Compliant** or **Non-compliant**. **N/A** indicates the test was Not Applicable to the EUT.

The measurement uncertainty is not accounted for determination of the statement of compliance. The statement of compliance is based only on the measurement value recorded.

> **Note:** Maintenance of compliance is the responsibility of the Manufacturer. Any modifications to the product should be assessed to determine their potential impact on the compliance status of the EUT with respect to the standards detailed in this test report.

The following table summarizes the tests performed in terms of the specification, class or performance criterion applied, and the EUT modification state.

Test Case	Test Type	Specification	Test Sample	Modifications	Config.	Result
2.1	AC Main Conducted Emissions	15.207 / 15.109	Kona Mega Gen3 Gateway	none	see § 2.1	**Compliant**
2.2	6dB Bandwidth	15.247(a)	Kona Mega Gen3 Gateway	none	see § 2.2	**Compliant**
2.3	Max Output Power	15.247(b, 3)	Kona Mega Gen3 Gateway	none	see § 2.3	**Compliant**
2.4	Band Edge	15.247(d)	Kona Mega Gen3 Gateway	none	see § 2.4	**Compliant**
2.5	Power Spectral Density	15.247(e)	Kona Mega Gen3 Gateway	none	see § 2.5	**Compliant**
2.6	Conducted Spurious Emissions (Non-Restricted Band)	15.247(d)	Kona Mega Gen3 Gateway	none	see § 2.6	**Compliant**
2.7	EUT Position	ANSI C63.4	Kona Mega Gen3 Gateway	none	see § 2.7	**Fixed Position**
2.8	Radiated Spurious Emission (Restricted Band)	15.205, 15.209 15.247(d)	Kona Mega Gen3 Gateway	none	see § 2.8	**Compliant**
2.9	Radiated Emission	15.109	Kona Mega Gen3 Gateway	none	see § 2.9	**Compliant**
2.10	RF Exposure	15.247(i)	Kona Mega Gen3 Gateway	none	see § 2.10	**Exempt**

Refer to the test data for applicable test conditions.

2.1 AC Main Power Line Conducted Emissions

Test Lab: Electronics Test Centre, Airdrie	**EUT: Kona Mega Gen3 Gateway**
Test Personnel: Joseph Yumol	**Standard: FCC Part 15.207, FCC Part 15.107**
Date: 2026-08-17 (22.0°C, 46.3% RH)	**Basic Standard: ANSI C63.10**
	Basic Standard: ANSI C63.4

EUT status: Compliant

Specification: FCC Part 15.207

Frequency (MHz)	Quasi-Peak Limit (dBµV)	Average Limit (dBµV)
0.15 – 0.5	66 to 56 *	56 to 46 *
0.5 – 5	56	46
5 – 30	60	50
Criteria: The conducted emissions produced by a device shall not exceed the limits as specified. ***Limits decrease linearly with the logarithm of the frequency*		

Specification: FCC Part 15.107

Frequency (MHz)	Quasi-Peak Limit (dBµV)	Average Limit (dBµV)
0.15 – 0.5	79	66
0.5 – 5	73	60
5 – 30	73	60
Criteria: The conducted emissions produced by a device shall not exceed the limits as specified. **Note:** The more stringent limit applies at transition frequencies.		

2.1.1 Test Guidance

Before any testing is performed, the Ambient (measurement noise floor) is recorded, and a QC check is performed to show that the system is functioning correctly.

The EUT is powered through a 50µH Line Impedance Stabilizing Network (LISN) which is placed 80cm away from the EUT. For tabletop equipment, a vertical ground plane is placed 40cm from the edge of the table. Lastly, the spectrum analyzer is connected to the LISN via armored cable run from the control room to the test chamber. Both the LISN and vertical ground plane are grounded to the reference ground plane on the chamber floor.

Testing starts with a scan, performed under software control. After this is complete, the list of frequencies of interest is generated. These frequencies are then investigated for quasi-peak and average amplitude, as applicable. Emissions measured with a QP detector that fall below the Average limit are deemed to meet both requirements.

2.1.2 Deviations From The Standard

There were no deviations from the EUT setup or methodology specified in the standard.

2.1.3 Test Equipment

Testing was performed with the following equipment:

Equipment	Manufacturer	Model #	Asset #	Calibration Date	Calibration Due
EMC Software	UL	Ver. 9.5	SWE021	N/A	
EMI receiver	Agilent	N9038A (FW A.22.08)	6906	2026-02-17	2027-02-17
LISN 150kHz to 30MHz	Com-Power	LI-215A	6180	2024-08-28	2026-08-28
Temp/Humid Data Logger	LASCAR	EL-WIFI-TH	7033	2025-12-05	2026-12-05
CE Cable	Insulated Wire Incorporated	KPS-1501A-3600-KPS 01102006	4436	2026-01-09	2027-01-09

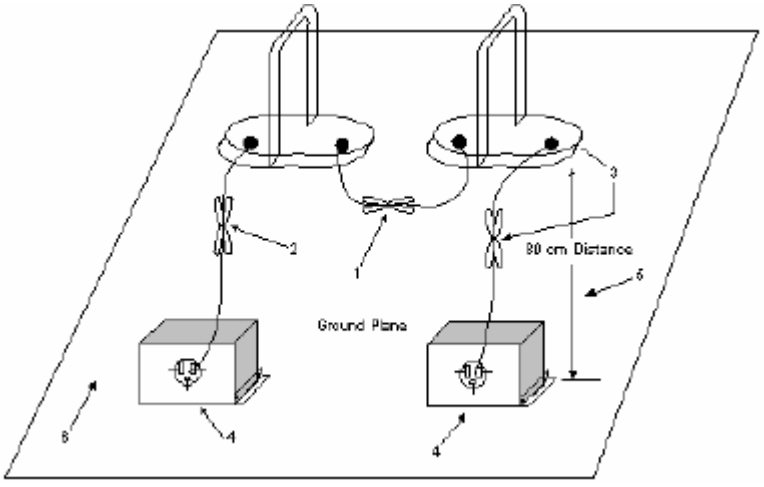
2.1.4 Test Sample Verification, Configuration & Modifications

The EUT was set to transmit continuously on a selected channel with test-specific software. The output was modulated as in normal operation. EUT has option of POE. EUT tested for conducted emission on AC side of POE adaptor model#PD-9501GO-ET/AC and serial#C19026674000302. Customer is not providing POE adaptor with EUT.

Although the customer does not provide a POE injector with the EUT, a commercially available POE injector was used to verify compliance of the EUT with the requirements of FCC Parts 15.207 and 15.107.

The EUT met the requirements without modification.

Diagram of setup for Conducted Emissions testing:



2.1.5 Conducted Emissions Data TX Mode

The emissions data is presented in tabular form, showing the uncorrected spectrum analyzer reading, the correction factors applied, the net result, the value(s) of limit at the frequency measured, and the Delta between the result and the limit.

Freq. Marker	Freq. (MHz)	Raw reading (dBµv)	Det.	LISN Factor (dB/m)	Cable Loss (dB)	Corrected Reading (dBµV)	FCC 207 AV Limit (dBµV)	Delta (dB)	L / N
1	0.16491	28.13	Av	0.10	9.80	38.03	55.21	-17.18	Line
2	0.51162	24.97	Av	0.00	9.90	34.87	46.00	-11.13	Line
1	0.16118	37.41	Av	0.00	9.80	47.21	55.40	-8.19	Neutral
2	0.50789	33.35	Av	0.00	9.90	43.25	46.00	-2.75	Neutral

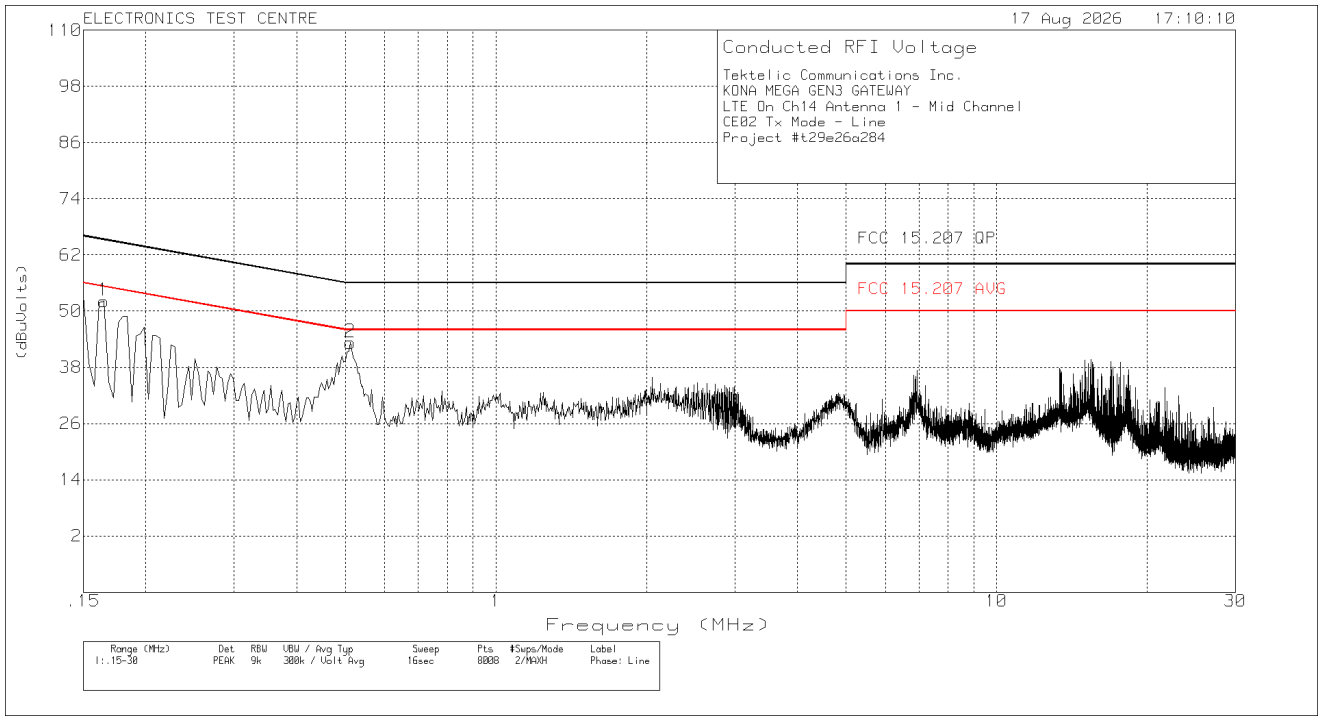
Meter Reading in dBµV + LISN Factor in dB + Gain/Loss Factor in dB = Corrected Emission Strength in dBµV.

Notes:

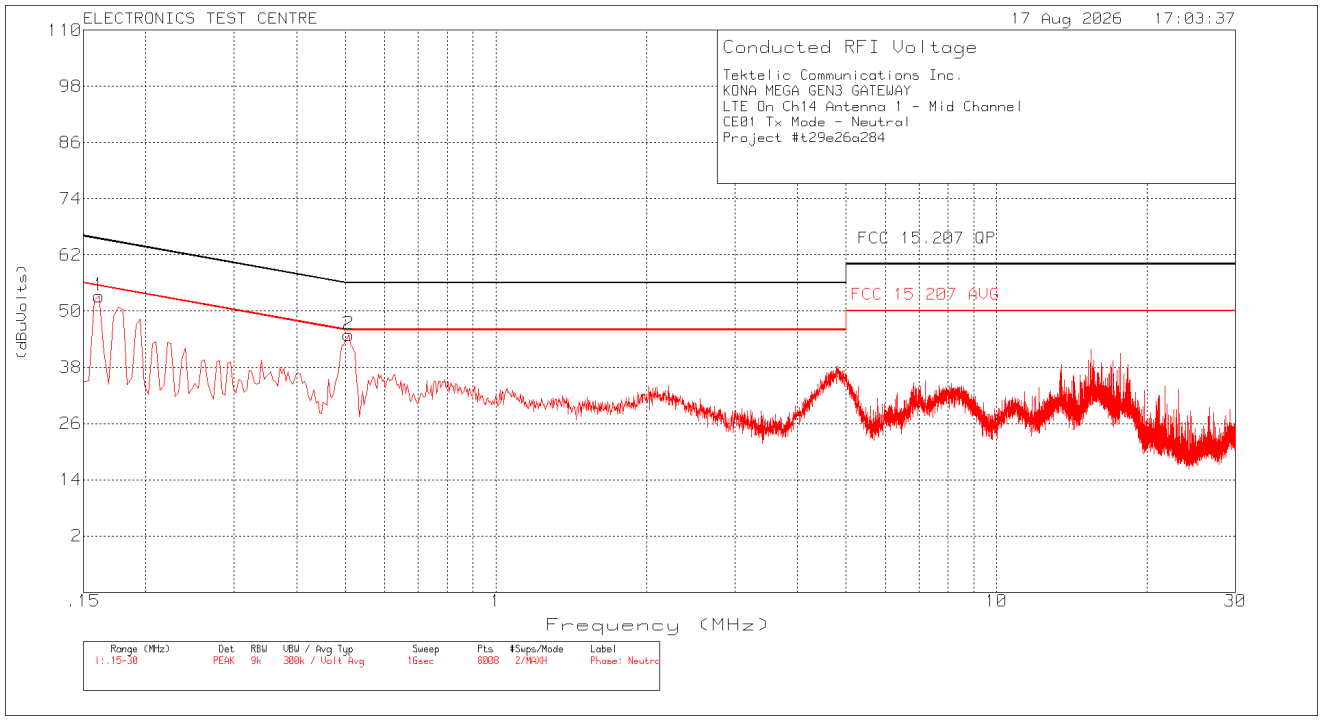
- When a preamp is used, the resulting gain is compensated, producing a negative value for the Cable Loss.
- Av = Linear Average detector

Negative values for Delta indicate compliance.

Plot of Conducted Emissions: LINE



Plot of Conducted Emissions: Neutral



2.1.6 Conducted Emissions Data RX Mode

The emissions data is presented in tabular form, showing the uncorrected spectrum analyzer reading, the correction factors applied, the net result, the value(s) of limit at the frequency measured, and the Delta between the result and the limit.

Freq. Marker	Freq. (MHz)	Raw reading (dBµv)	Det.	LISN Factor (dB/m)	Cable Loss (dB)	Corrected Reading (dBµV)	Class A AV Limit (dBµV)	Delta (dB)	L / N
1	0.16491	26.95	Av	0.10	9.80	36.85	66	-29.15	Line
2	0.51162	19.37	Av	0.00	9.90	29.27	60	-30.73	Line
1	0.15373	30.67	Av	0.00	9.80	40.47	66	-25.53	Neutral
2	0.51907	26.80	Av	0.00	9.90	36.70	60	-23.3	Neutral

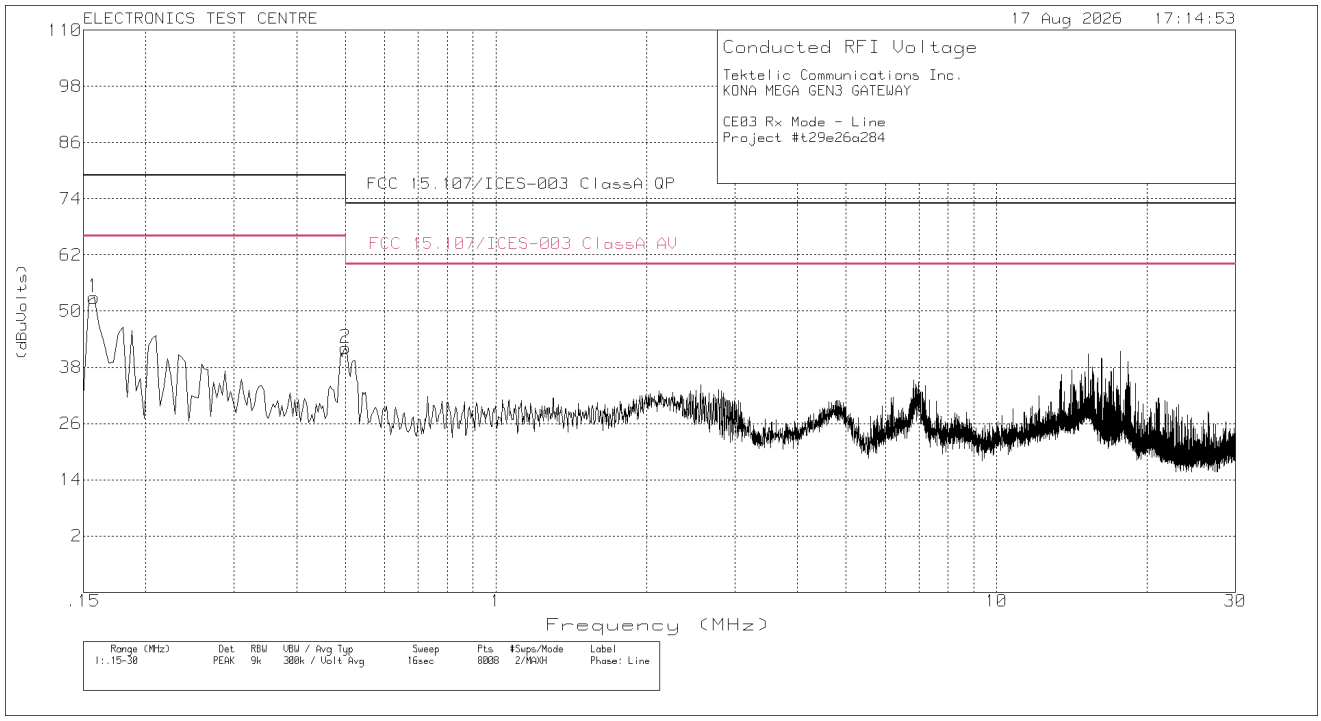
Meter Reading in dBµV + LISN Factor in dB + Gain/Loss Factor in dB = Corrected Emission Strength in dBµV.

Notes:

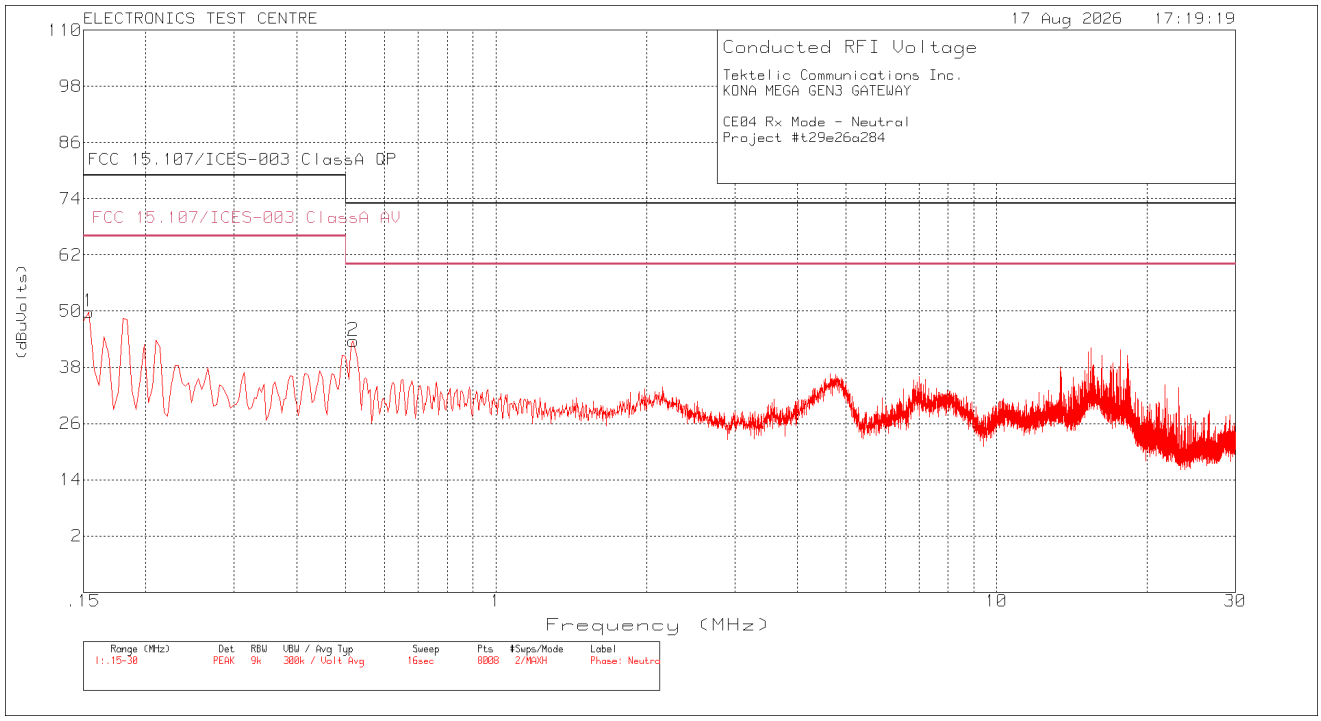
- When a preamp is used, the resulting gain is compensated, producing a negative value for the Cable Loss.
- Av = Linear Average detector

Negative values for Delta indicate compliance.

Plot of Conducted Emissions: LINE



Plot of Conducted Emissions: Neutral



2.2 6dB Bandwidth

Test Lab: Electronics Test Centre, Airdrie	**EUT: Kona Mega Gen3 Gateway**
Test Personnel: Joseph Yumol	**Standard: FCC PART 15.247**
Date: 2026-08-14 (22.9°C, 44.54% RH)	**Basic Standard: ANSI C63.10 FCC OET KDB 558074**

EUT status: Compliant

Specification: FCC Part 15.247 (a, 2), FCC 15.215 (c)

Criteria: Systems using digital modulation techniques may operate in the 902-928 MHz bands. The minimum 6 dB bandwidth shall be at least 500 kHz.

2.2.1 Test Guidance: ANSI C63.10, Clause 11.8 Option 2/ FCC OET KDB 558074

This measurement is performed at low, mid and high frequencies, with modulation.

The RF output of EUT with an antenna connector is fed to the input of the spectrum analyzer through appropriate attenuation/DC blocker. The loss from the cable and the attenuator/DC blocker were added on the analyzer as gain offset setting there by allowing direct measurements, without the need for any further corrections.

a) Set RBW = shall be in the range of 1% to 5% of the OBW but not less than 100 kHz.

b) Set the VBW ≥ [3 × RBW].

c) Detector = peak.

d) Trace mode = max-hold.

e) Sweep = No faster than coupled (auto) time.

f) Allow the trace to stabilize.

g) The automatic bandwidth measurement capability of an instrument may be employed using the X dB bandwidth mode with X set to 6 dB, if the functionality described above (i.e., RBW = 100 kHz, VBW ≥ 3 × RBW, and peak detector with maximum hold) is implemented by the instrumentation function. When using this capability, care shall be taken so that the bandwidth measurement is not influenced by any intermediate power nulls in the fundamental emission that might be ≥ 6 dB.

2.2.2 Deviations From The Standard:

There were no deviations from the EUT setup or methodology specified in the standard.

2.2.3 Test Equipment

Testing was performed with the following equipment:

Equipment	Manufacturer	Model #	Asset #	Cal. Date	Cal. Due
EMI receiver	Agilent	N9038A (FW A.22.08)	6906	2026-02-17	2027-02-17
Temp/Humid Data Logger	LASCAR	EL-WIFI-TH	7033	2025-12-05	2026-12-05
Attenuator (DC to 26 GHz)	Mini-Circuits	BW-S10-2W263+	6933	2025-10-14	2027-10-14
Coaxial Cables (RF)	W.L. GORE	PGR01R01036	7024	2026-01-09	2027-01-09
DC Blocker (9 KHz - 27 GHz)	Centric RF	C0927 SMA	6987	2026-01-19	2027-01-19

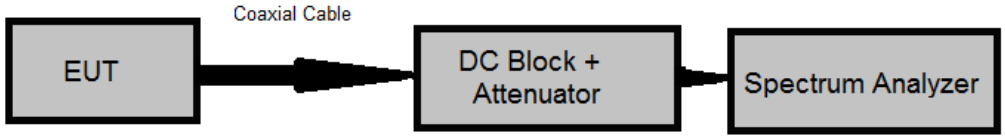
2.2.4 Test Sample Verification, Configuration & Modifications

The EUT was set to transmit continuously on a selected channel with test-specific software. The output was modulated as in normal operation.

The EUT met the requirements without modification.

Test setup diagrams for Occupied Bandwidth testing:

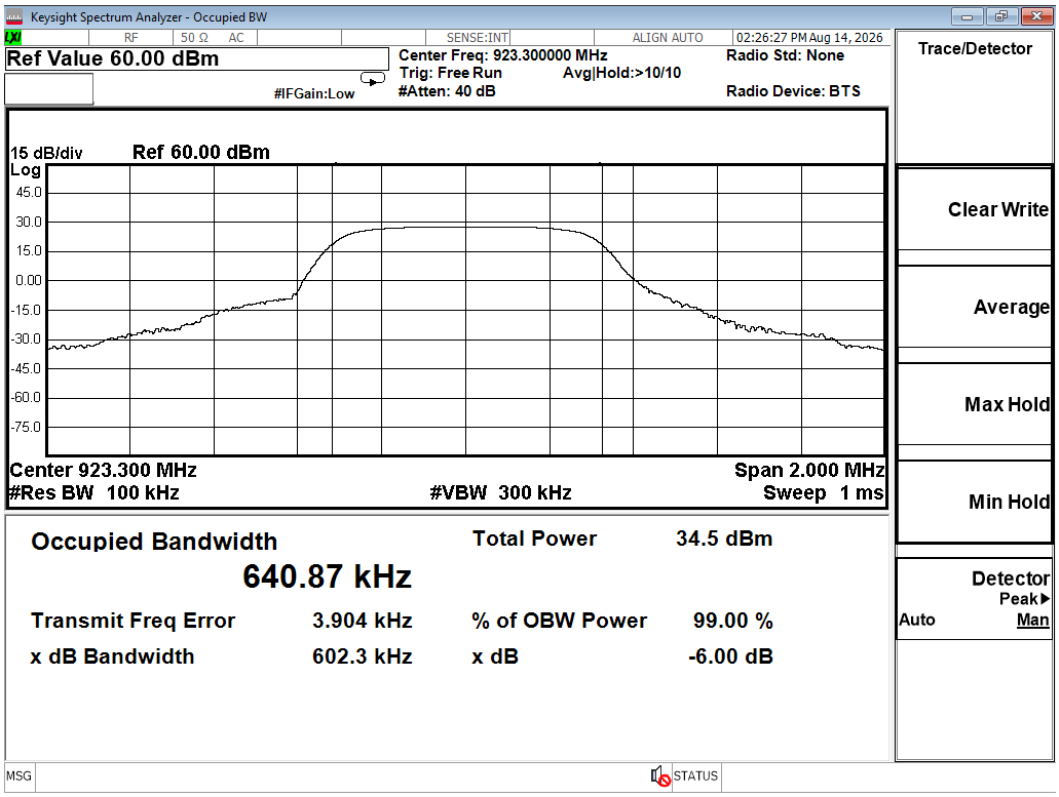
Conducted:



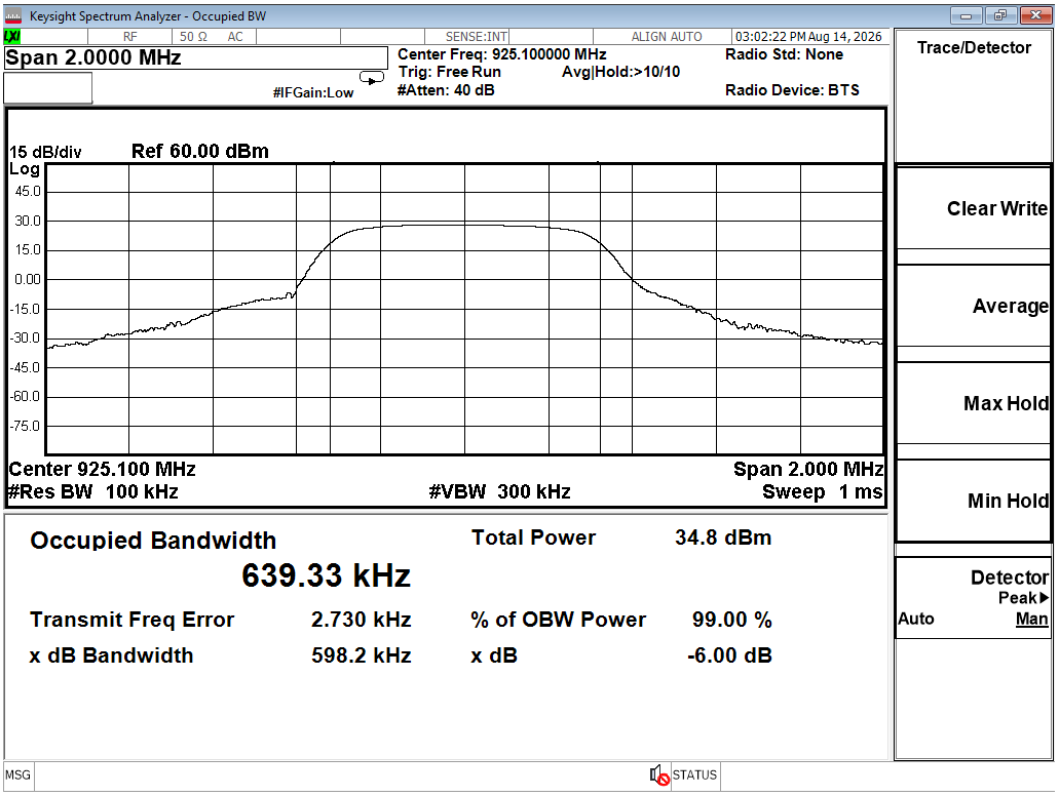
2.2.5 Channel Bandwidth Data:

Mode of operation	Antenna Port	Channel	Freq. [MHz]	6 dB BW [kHz]	Limit BW [KHz]
LoRa 500 KHz	0	Low	923.3	602.3	≥ 500
		Mid	925.1	598.2	
		High	927.5	600.7	

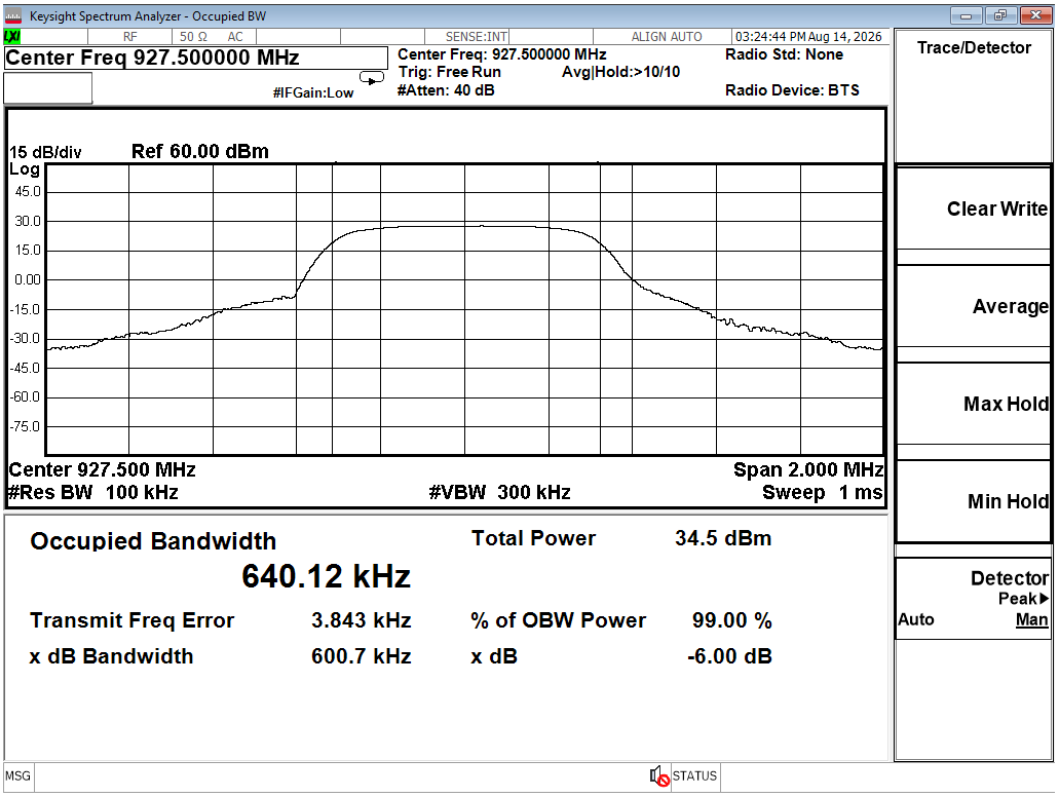
Screen Captures from the spectrum analyzer: Low Channel



Screen Captures from the spectrum analyzer: MID Channel



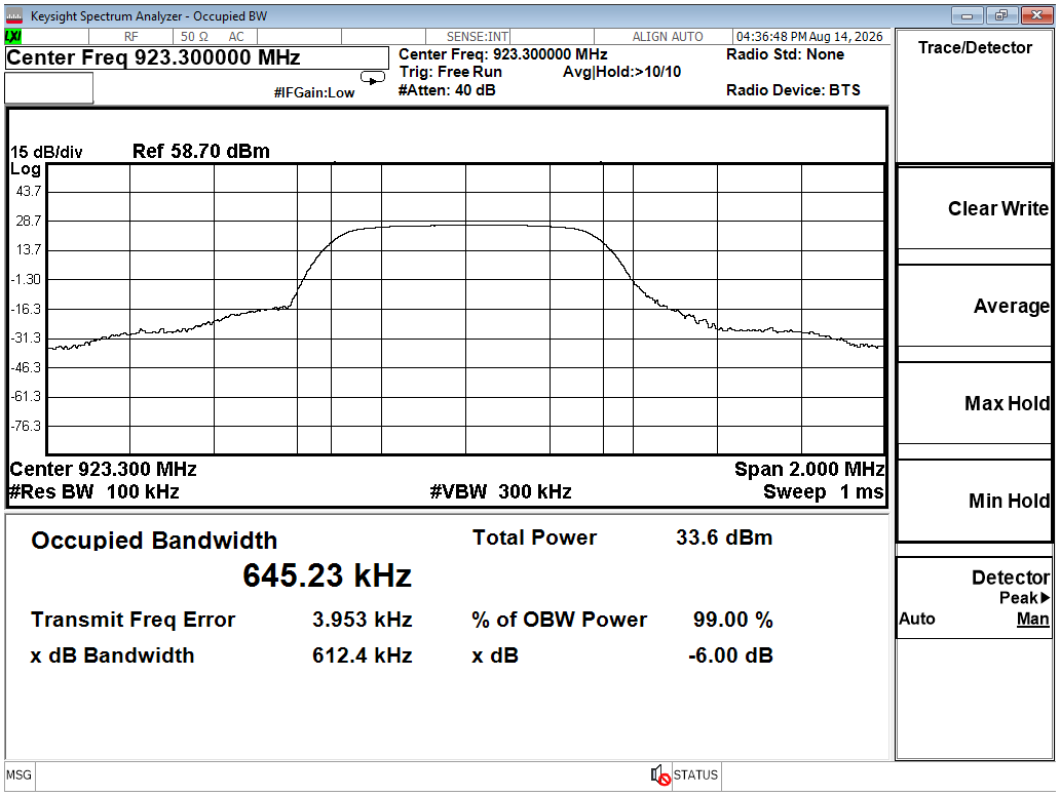
Screen Captures from the spectrum analyzer: High Channel



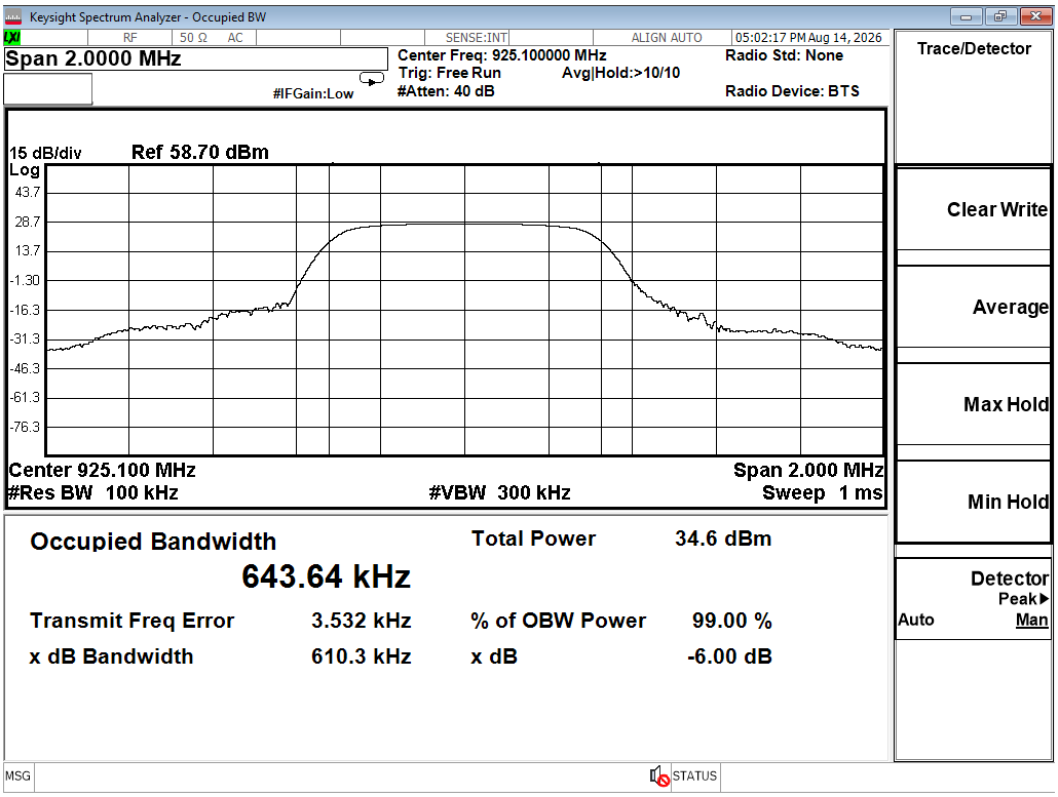
2.2.6 Channel Bandwidth Data: LoRa

Mode of operation	Antenna Port	Channel	Freq. [MHz]	6 dB BW [kHz]	Limit BW [KHz]
LoRa 500 KHz	1	Low	923.3	612.4	≥ 500
		Mid	925.1	610.3	
		High	927.5	608.7	

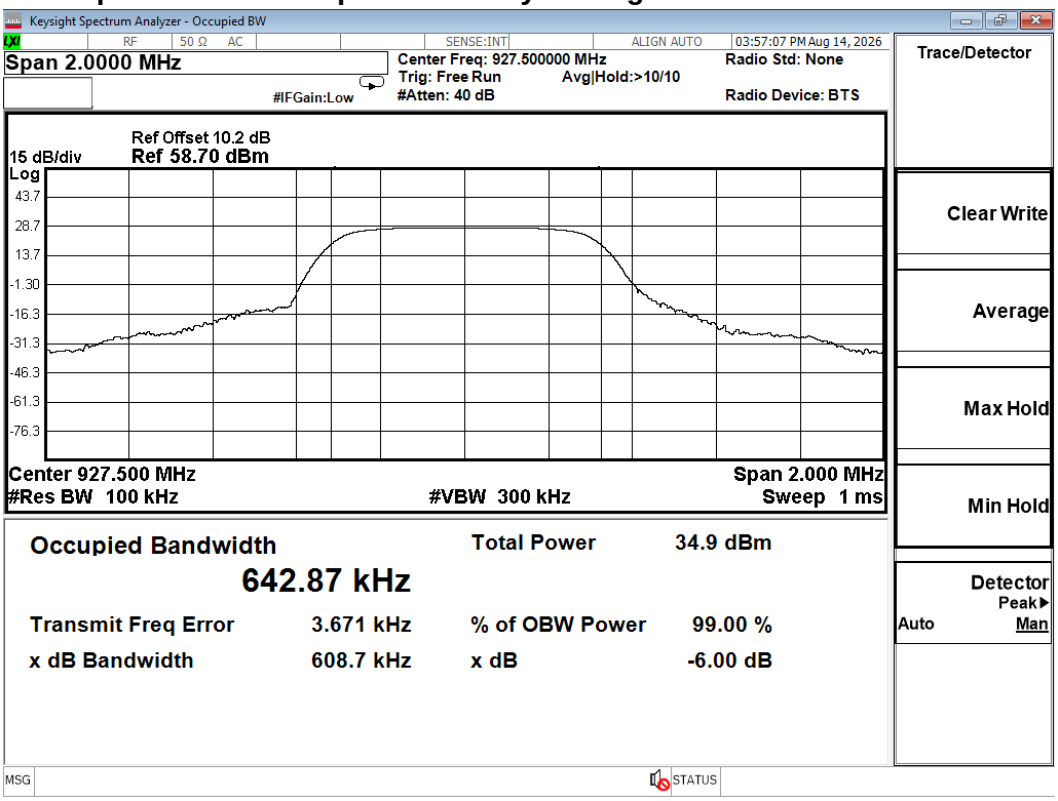
Screen Captures from the spectrum analyzer: Low Channel



Screen Captures from the spectrum analyzer: MID Channel



Screen Captures from the spectrum analyzer: High Channel



2.3 Max Average Output Power

Test Lab: Electronics Test Centre, Airdrie	**EUT: Kona Mega Gen3 Gateway**
Test Personnel: Joseph Yumol	**Standard: FCC PART 15.247**
Date: 2026-08-14 (22.9°C, 44.54% RH)	**Basic Standard: ANSI C63.10 FCC OET KDB 558074**

EUT status: Compliant

Specification: FCC Part 15.247(b, 3)

Criteria (3) For systems using digital modulation in the 902-928 MHz bands: 1 Watt.

2.3.1 Test Guidance: ANSI C63.10, Clause 11.9.2.2.2/ FCC OET KDB 558074

This measurement is performed at low, mid and high frequencies, with modulation.

The RF output of EUT with an antenna connector is fed to the input of the spectrum analyzer through appropriate attenuation. The loss from the cable and the attenuator were added on the analyzer as gain offset setting there by allowing direct measurements, without the need for any further corrections.

Output Power Method AVGSA-1	
Span	≥ 1.5 times the OBW
RBW	1 – 5 % of the OBW, ≤ 1 MHz
VBW	≥ 3 x RBW
Number of Points in sweep	≥ 2 x Span / RBW
Sweep time	Auto
Detector	RMS (Power Averaging)
Sweep trigger	Free Run (Duty Cycle ≥98%)
Trace Average	At least 100 traces in power Averaging (RMS)
Power measured	Integrated the spectrum across the OBW of the signal using the S/A band power measurement function, with band limit set equal to the OBW band edge.

2.3.2 Deviations From The Standard:

There were no deviations from the EUT setup or methodology specified in the standard.

2.3.3 Test Equipment

Testing was performed with the following equipment:

Equipment	Manufacturer	Model #	Asset #	Cal. Date	Cal. Due
EMI receiver	Agilent	N9038A (FW A.22.08)	6906	2026-02-17	2027-02-17
Temp/Humid Data Logger	LASCAR	EL-WIFI-TH	7033	2025-12-05	2026-12-05
Attenuator (DC to 26 GHz)	Mini-Circuits	BW-S10-2W263+	6933	2025-10-14	2027-10-14
Coaxial Cables (RF)	W.L. GORE	PGR01R01036	7024	2026-01-09	2027-01-09
DC Blocker (9 KHz - 27 GHz)	Centric RF	C0927 SMA	6987	2026-01-19	2027-01-19

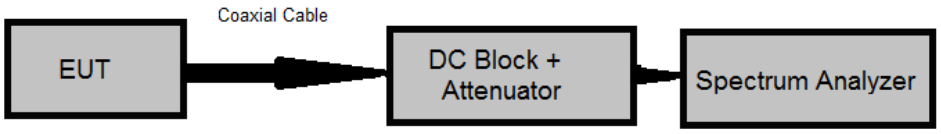
2.3.4 Test Sample Verification, Configuration & Modifications

The EUT was set to a selected channel with test-specific software. The output was modulated as in normal operation.

The EUT met the requirements without modification.

Test setup diagrams for Power testing:

Conducted:

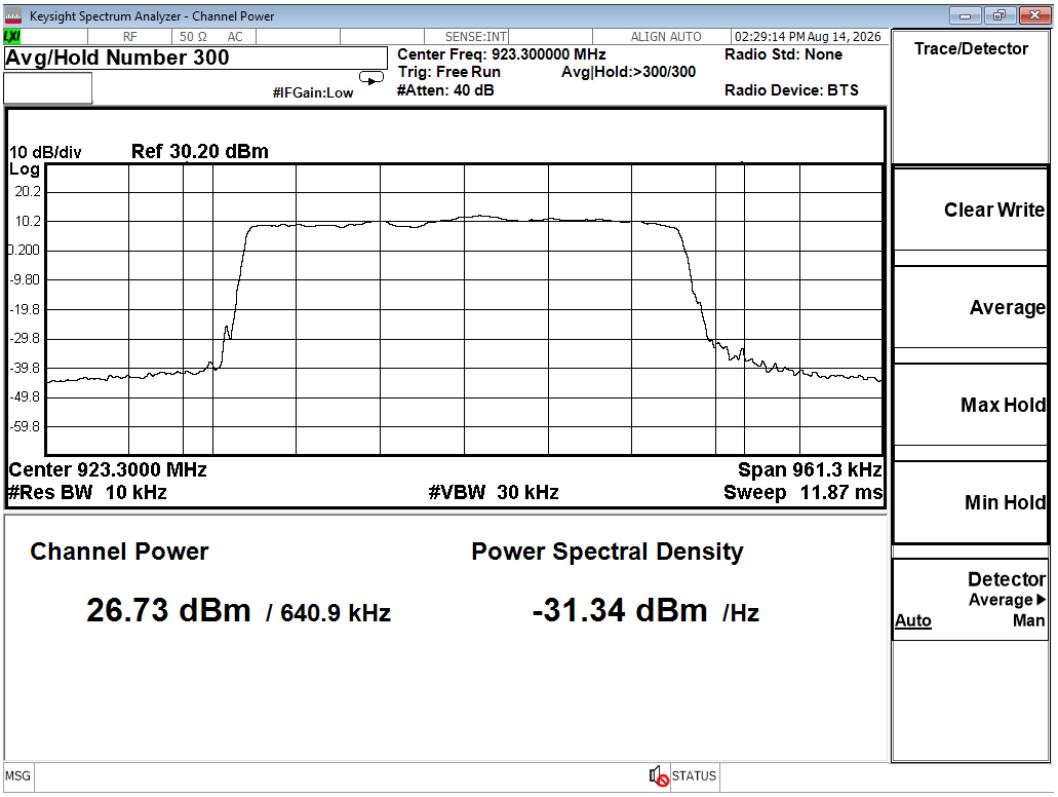


2.3.5 Max Average Output Power Data:

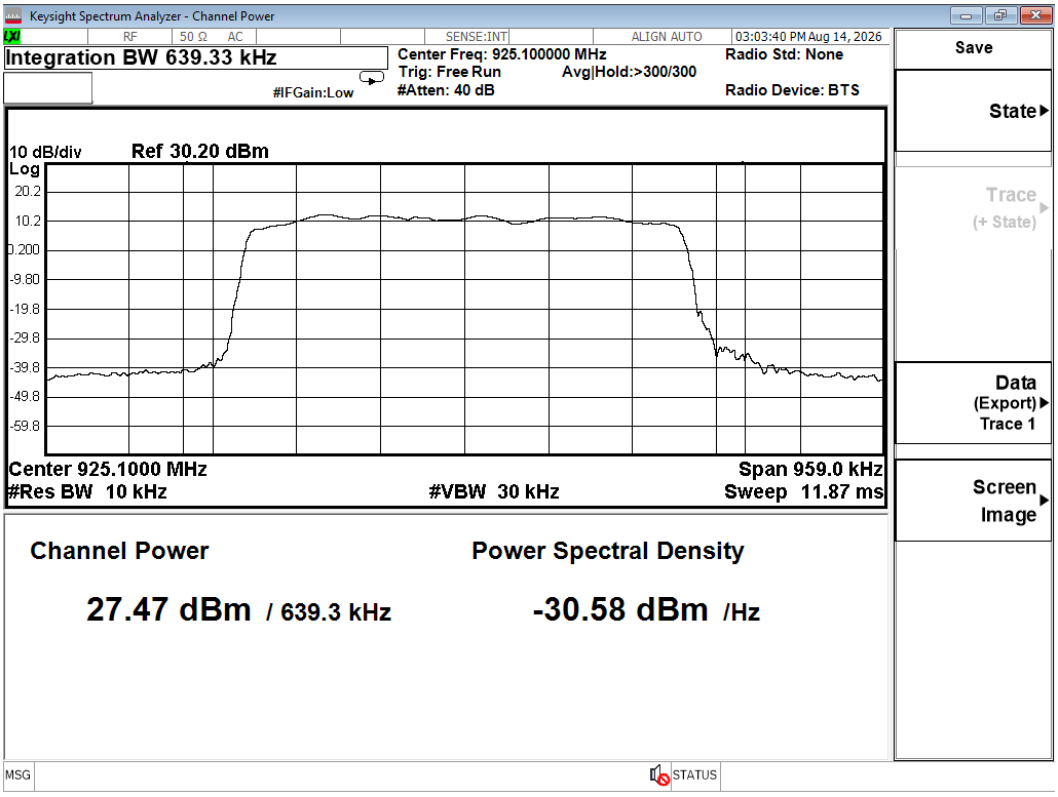
Mode of operation	Antenna Port	Channel	Freq. [MHz]	Max Average Power [dBm]	Limit Power [dBm]
LoRa 500 KHz	0	Low	923.3	26.73	≤ 30 (1Watt)
		Mid	925.1	27.47	
		High	927	27.32	

Note: According to Tektelic Communications Inc.'s operational description, the maximum conducted output power is set to 28 dBm to comply with the FCC §15.247(b)(4) requirement when using an 8 dBi gain antenna.

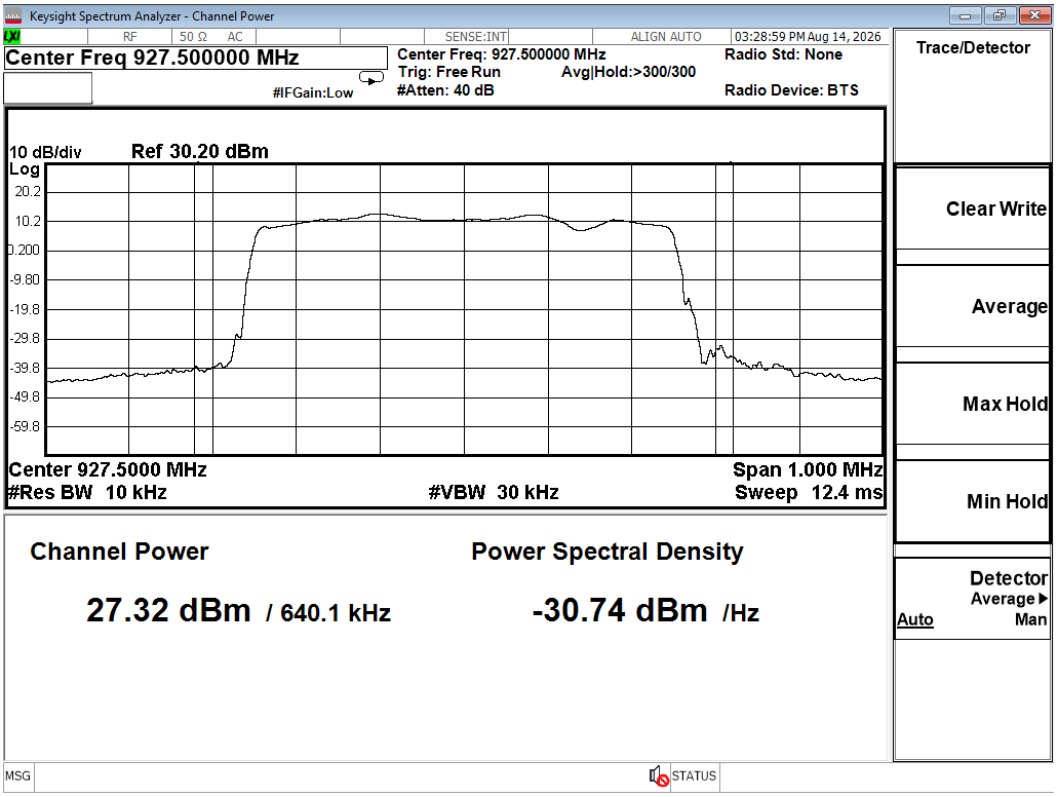
Screen Captures from the spectrum analyzer Low Channel



Screen Captures from the spectrum analyzer: MID Channel



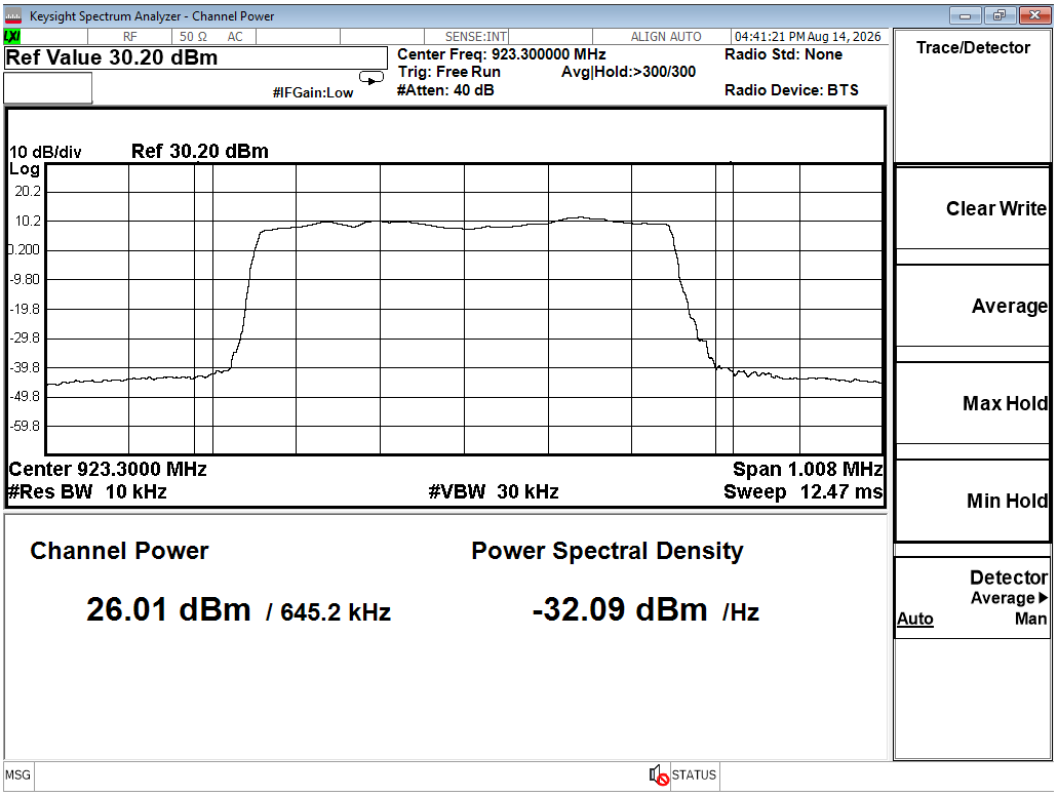
Screen Captures from the spectrum analyzer: High Channel



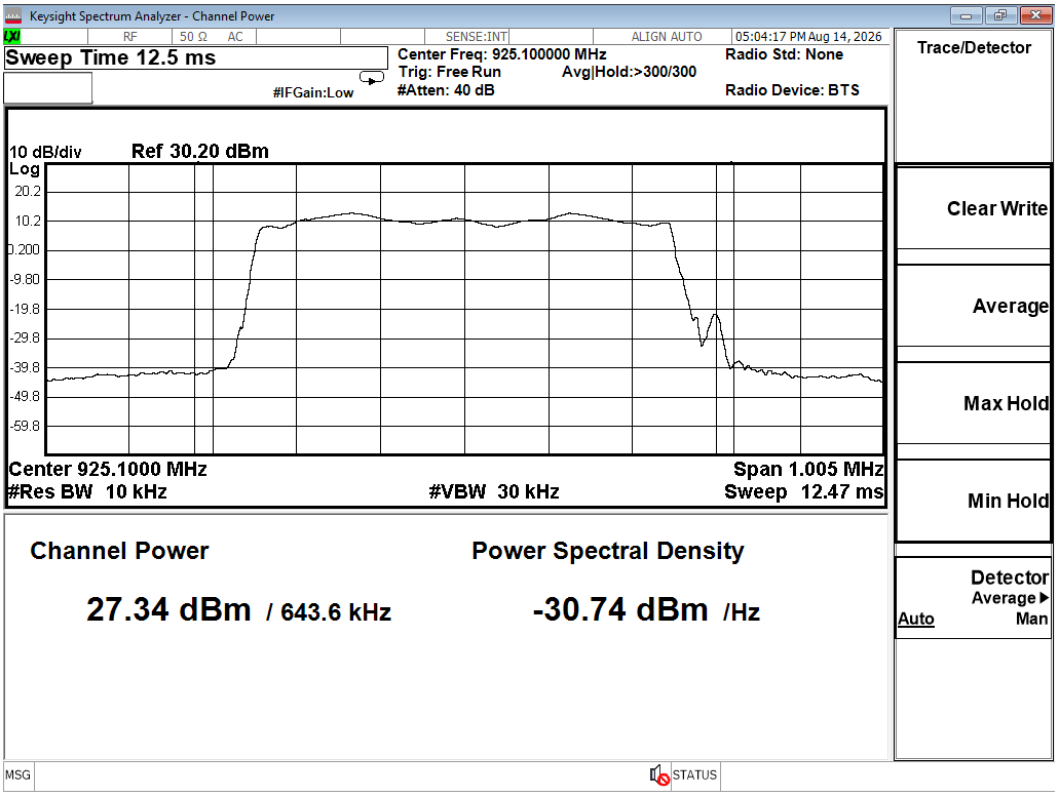
2.3.6 Max Average Output Power Data:

Mode of operation	Antenna Port	Channel	Freq. [MHz]	Max Average Power [dBm]	Limit Power [dBm]
LoRa 500 KHz	1	Low	923.3	26.01	≤ 30 (1Watt)
		Mid	925.1	27.34	
		High	927.5	27.68	

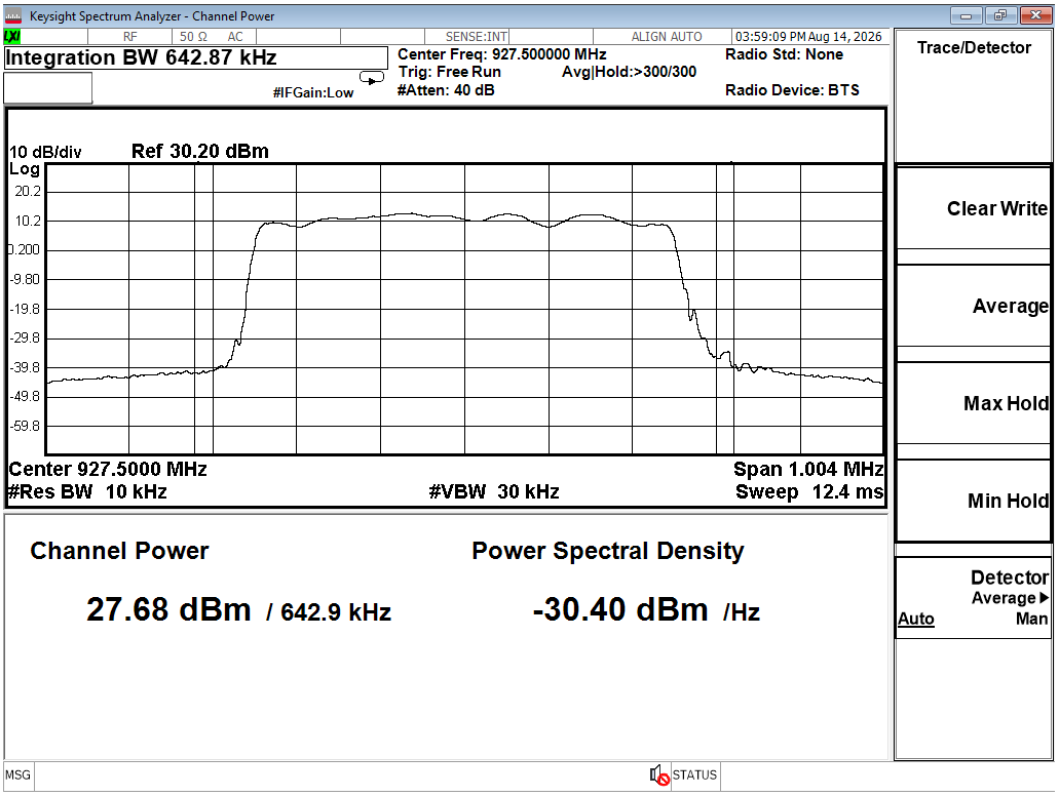
Screen Captures from the spectrum analyzer Low Channel



Screen Captures from the spectrum analyzer: MID Channel



Screen Captures from the spectrum analyzer: High Channel



2.4 Band Edge Attenuation

Test Lab: Electronics Test Centre, Airdrie	**EUT: Kona Mega Gen3 Gateway**
Test Personnel: Joseph Yumol	**Standard: FCC PART 15.247**
Date: 2026-08-14 (22.9°C, 44.54% RH)	**Basic Standard: ANSI C63.10 FCC OET KDB 558074**

EUT status: Compliant

Specification: FCC Part 15.247(d)

Criteria: 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)).

2.4.1 Test Guidance: ANSI C63.10 Clause 11.12.1 & 6.10.4, 6.10.6 / FCC OET KDB 558074

This measurement is performed at the low, MID and high frequencies, with modulation.

The RF output of EUT with an antenna connector is fed to the input of the spectrum analyzer through appropriate attenuation. The loss from the cable and the attenuator were added on the analyzer as gain offset setting there by allowing direct measurements, without the need for any further corrections.

The spectrum analyzer is set for a frequency span to show the band edge and the nearest channel. The RBW is set to ≥ 100 kHz. The VBW is set to ≥ (RBW * 3). The Peak detector is used, with the trace set to Max Hold.

The attenuation is measured with the Marker Delta function.

2.4.2 Deviations From The Standard:

There were no deviations from the EUT setup or methodology specified in the standard.

2.4.3 Test Equipment

Testing was performed with the following equipment:

Equipment	Manufacturer	Model #	Asset #	Cal. Date	Cal. Due
EMI receiver	Agilent	N9038A (FW A.22.08)	6906	2026-02-17	2027-02-17
Temp/Humid Data Logger	LASCAR	EL-WIFI-TH	7033	2025-12-05	2026-12-05
Attenuator (DC to 26 GHz)	Mini-Circuits	BW-S10-2W263+	6933	2025-10-14	2027-10-14
Coaxial Cables (RF)	W.L. GORE	PGR01R01036	7024	2026-01-09	2027-01-09
DC Blocker (9 KHz - 27 GHz)	Centric RF	C0927 SMA	6987	2026-01-19	2027-01-19

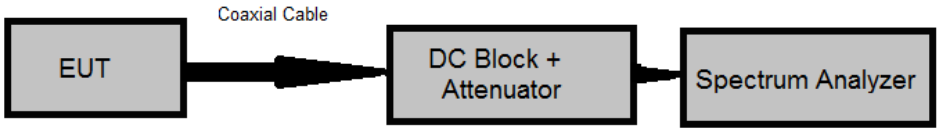
2.4.4 Test Sample Verification, Configuration & Modifications

The EUT was set to transmit continuously on a selected channel with test-specific software. The output was modulated as in normal operation.

The EUT met the requirements without modification.

Test setup diagrams for Band Edge Attenuation testing:

Conducted:

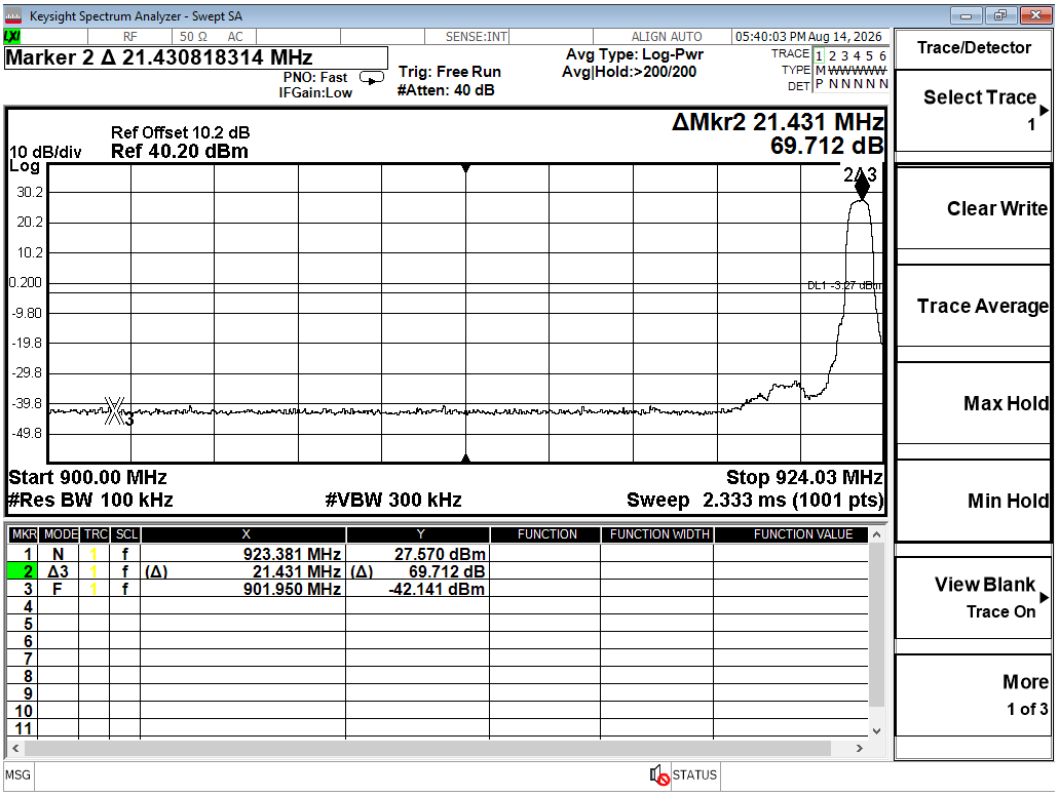


2.4.5 Band Edge Data LoRa DTS

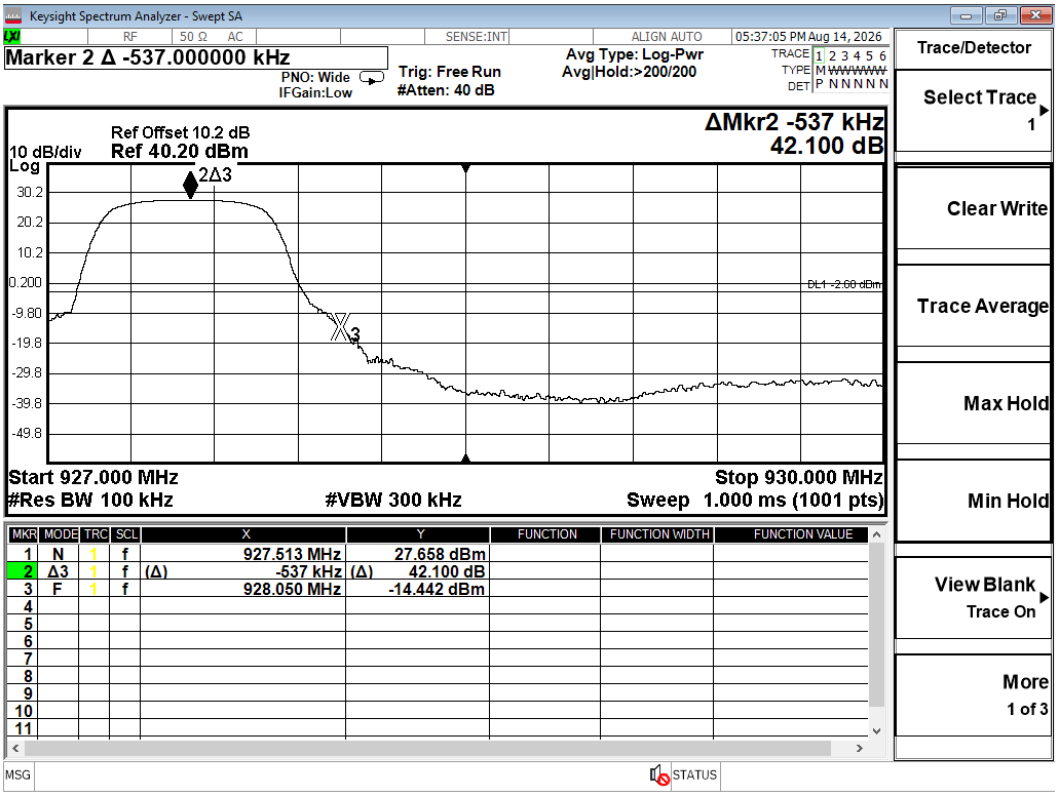
Worse Case Data

Mode of operation	Antenna Port	Channel	Attenuation at Band Edge	Attenuation Limit at Band Edge
LoRa 500KHz	0	923.3	69.712dBc	≥30 dBc
		927.5	42.10dBc	
LoRa 500KHz	1	923.3	69.584dBc	≥30 dBc
		927.5	44.994dBc	

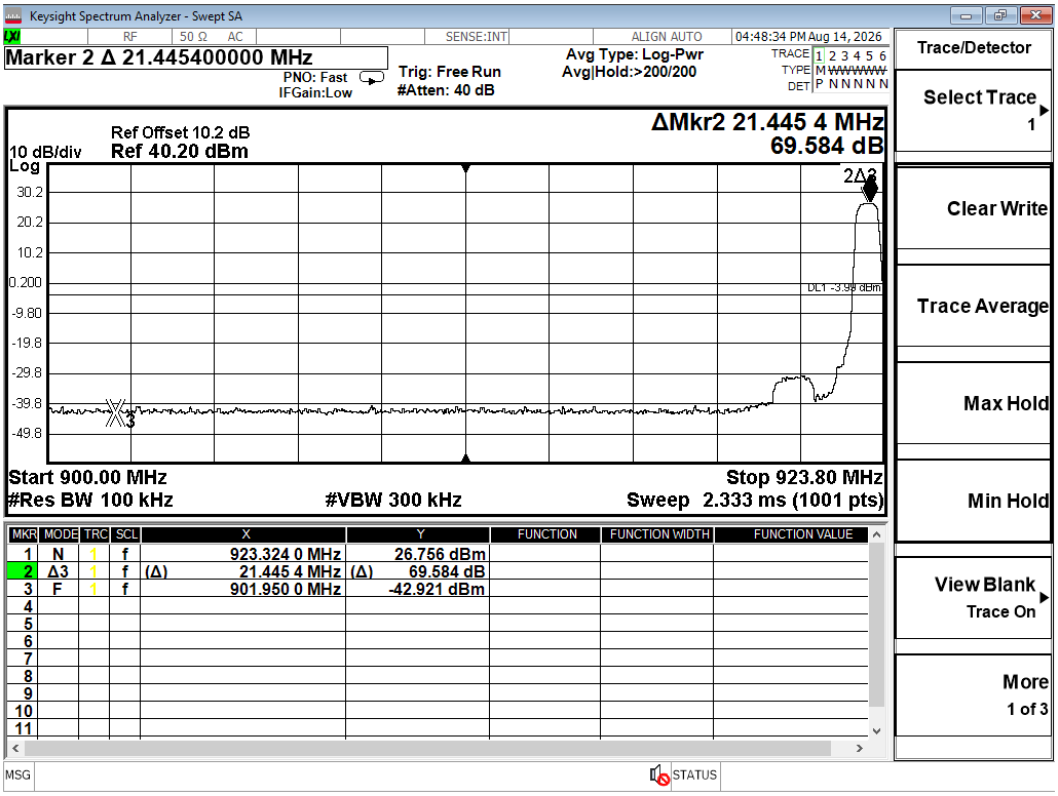
Screen Capture from the spectrum analyzer: Lower Band Edge (ANT Port 0)



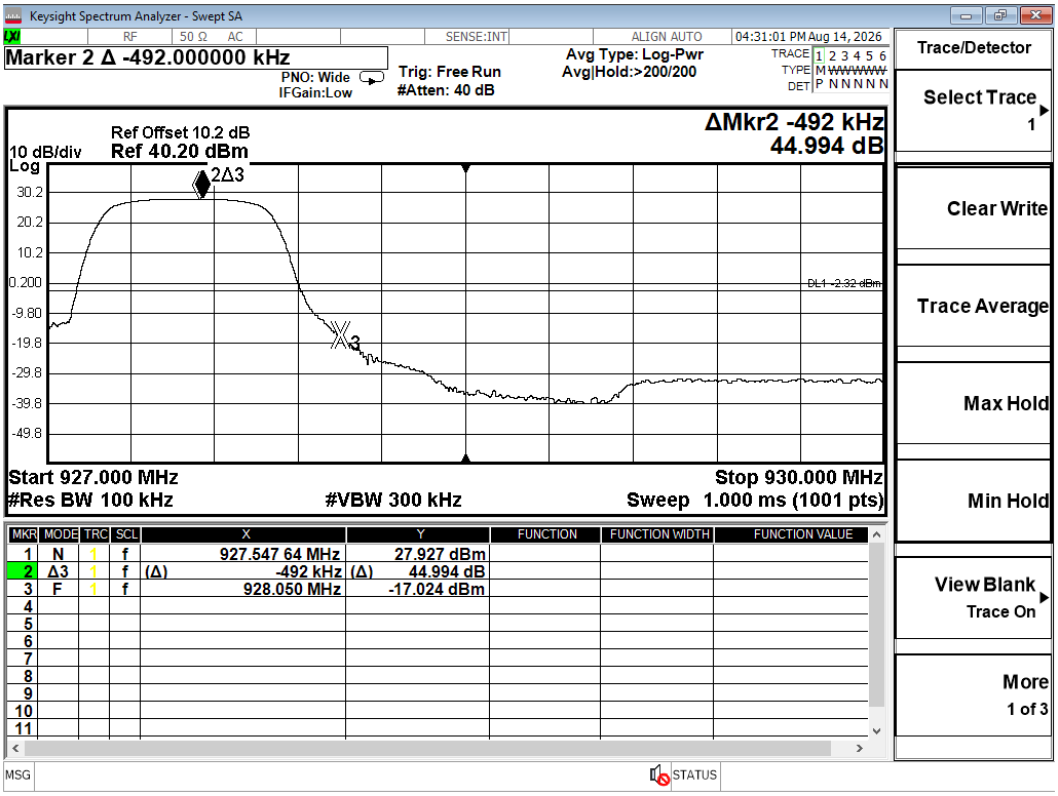
Screen Capture from the spectrum analyzer: Upper Band Edge (ANT Port 0)



Screen Capture from the spectrum analyzer: Lower Band Edge (ANT Port 1)



Screen Capture from the spectrum analyzer: Upper Band Edge (ANT Port 1)



2.5 Power Spectral Density

Test Lab: Electronics Test Centre, Airdrie	**EUT: Kona Mega Gen3 Gateway**
Test Personnel: Joseph Yumol	**Standard: FCC PART 15.247**
Date: 2026-08-14 (22.9°C, 44.54% RH)	**Basic Standard: ANSI C63.10**

EUT status: Compliant

Specification: FCC Part 15.247(e)

Criteria 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.

2.5.1 Test Guidance: ANSI C63.10, Clause 11.10.3 / FCC OET KDB 558074

This measurement is performed at low, mid and high frequencies, in continuous transmission, with modulation.

The RF output of EUT with an antenna connector is fed to the input of the spectrum analyzer through appropriate attenuation. The loss from the cable and the attenuator were added on the analyzer as gain offset setting there by allowing direct measurements, without the need for any further corrections.

Method AVGPSD-1 For DTS	
Span	≥ 1.5 times the OBW
RBW	3 kHz ≤ RBW ≥ 100 kHz.
VBW	≥ 3 x RBW
Number of Points in sweep	≥ 2 x Span / RBW
Sweep time	auto couple
Detector	RMS (Power Averaging)
Sweep trigger	Free Run (Duty Cycle ≥98%)
Trace Average	Minimum 100 traces in power Averaging (RMS)
PSD measured	Use the peak marker function to determine the maximum amplitude level.
If the measured value exceeds requirement, then reduce RBW (but no less than 3 kHz) and repeat (note that this may require zooming in on the emission of interest and reducing the span to meet the minimum measurement point requirement as the RBW is reduced).	

2.5.2 Deviations From The Standard:

There were no deviations from the EUT setup or methodology specified in the standard.

2.5.3 Test Equipment

Testing was performed with this equipment:

Equipment	Manufacturer	Model #	Asset #	Cal. Date	Cal. Due
EMI receiver	Agilent	N9038A (FW A.22.08)	6906	2026-02-17	2027-02-17
Temp/Humid Data Logger	LASCAR	EL-WIFI-TH	7033	2025-12-05	2026-12-05
Attenuator (DC to 26 GHz)	Mini-Circuits	BW-S10-2W263+	6933	2025-10-14	2027-10-14
Coaxial Cables (RF)	W.L. GORE	PGR01R01036	7024	2026-01-09	2027-01-09
DC Blocker (9 KHz - 27 GHz)	Centric RF	C0927 SMA	6987	2026-01-19	2027-01-19

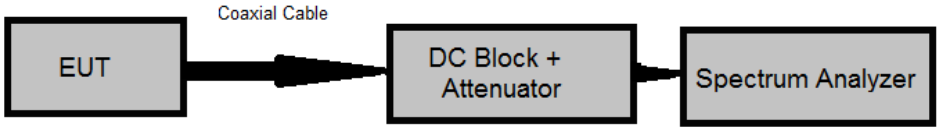
2.5.4 Test Sample Verification, Configuration & Modifications

The EUT was set to transmit continuously on a selected channel with test-specific software. The output was modulated as in normal operation.

The EUT met the requirements without modification.

Test setup diagrams for Power Spectral Density testing:

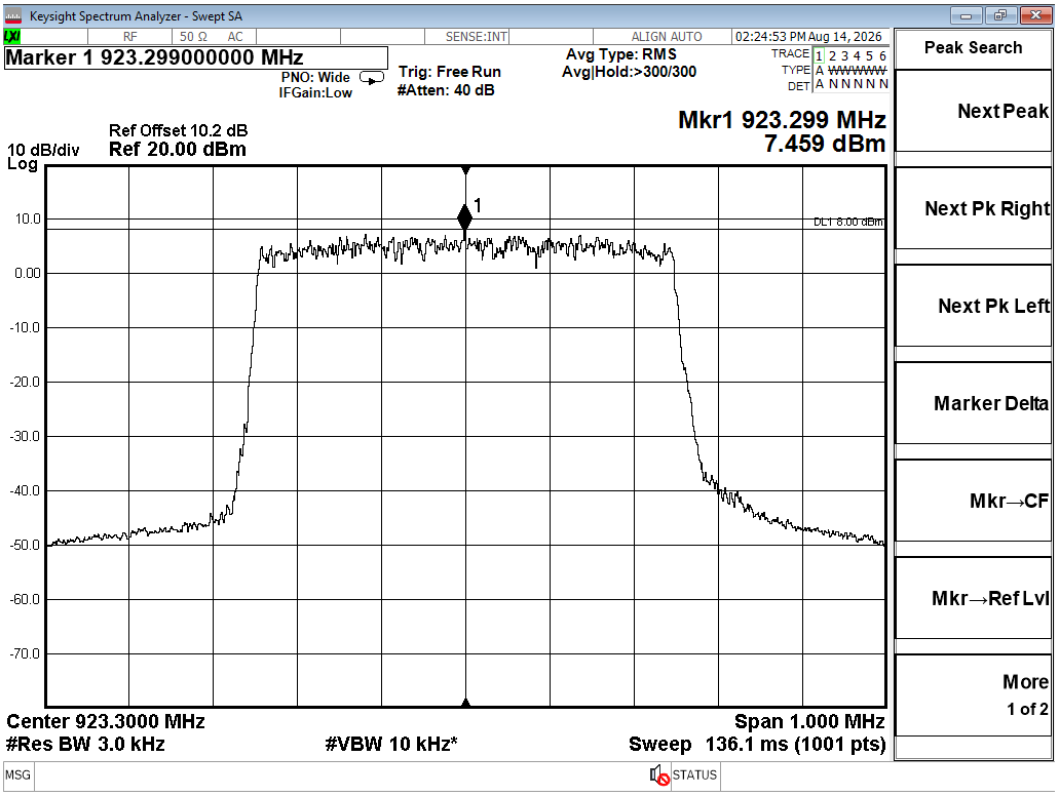
Conducted:



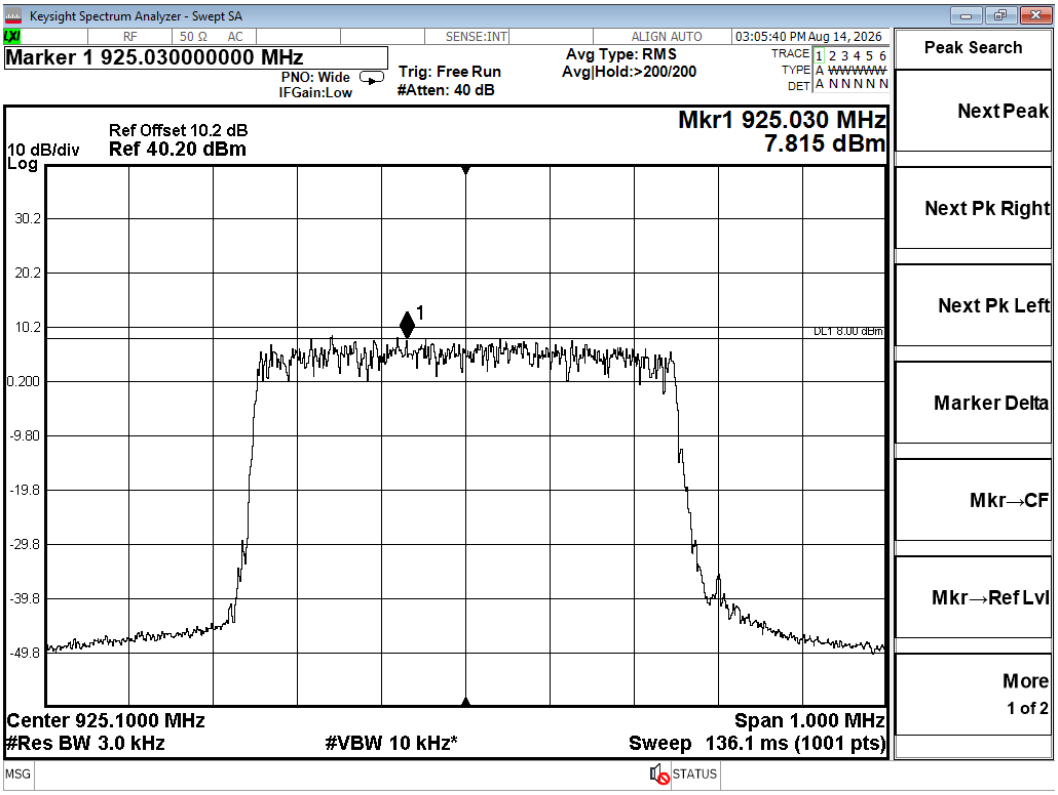
2.5.5 Average PSD Data: Port 0

Mode	Antenna Port	Channel	Frequency (MHz)	Average PSD (dBm)	Limit
LoRa 500 KHz	0	Low	923.3	7.459	≤ 8 / 3KHz
		Mid	925.1	7.815	
		High	927.5	7.706	

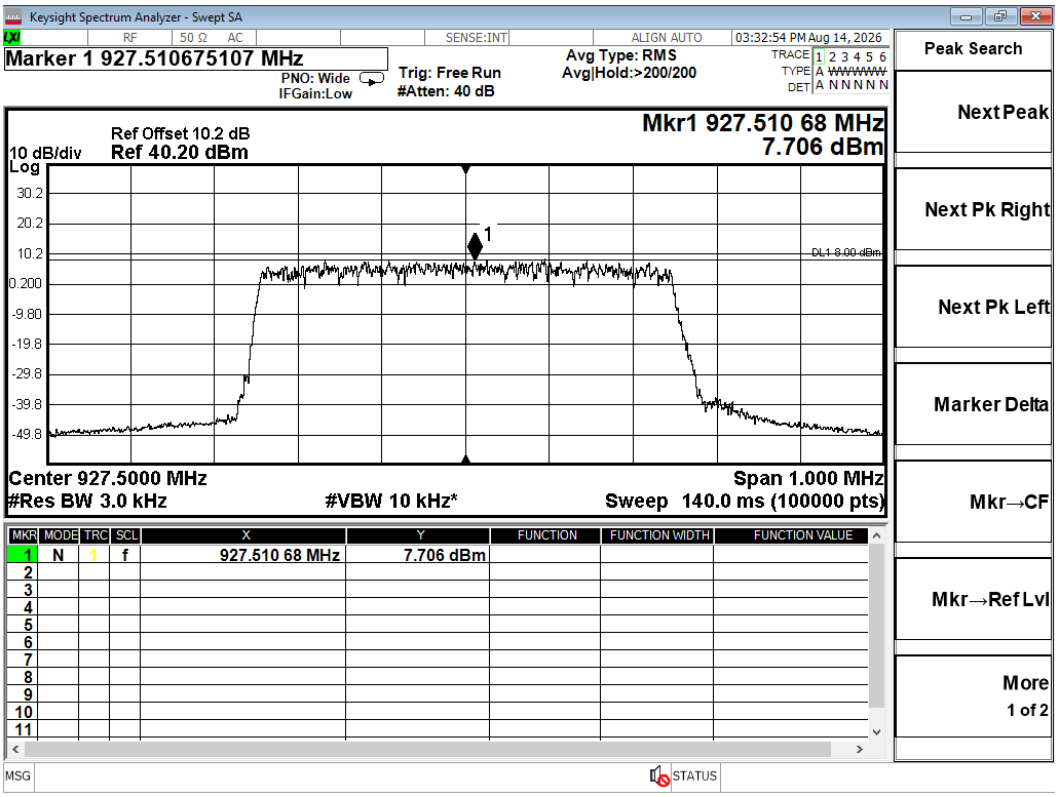
Screen Capture from Spectrum Analyzer: Low Channel



Screen Capture from Spectrum Analyzer: Mid Channel



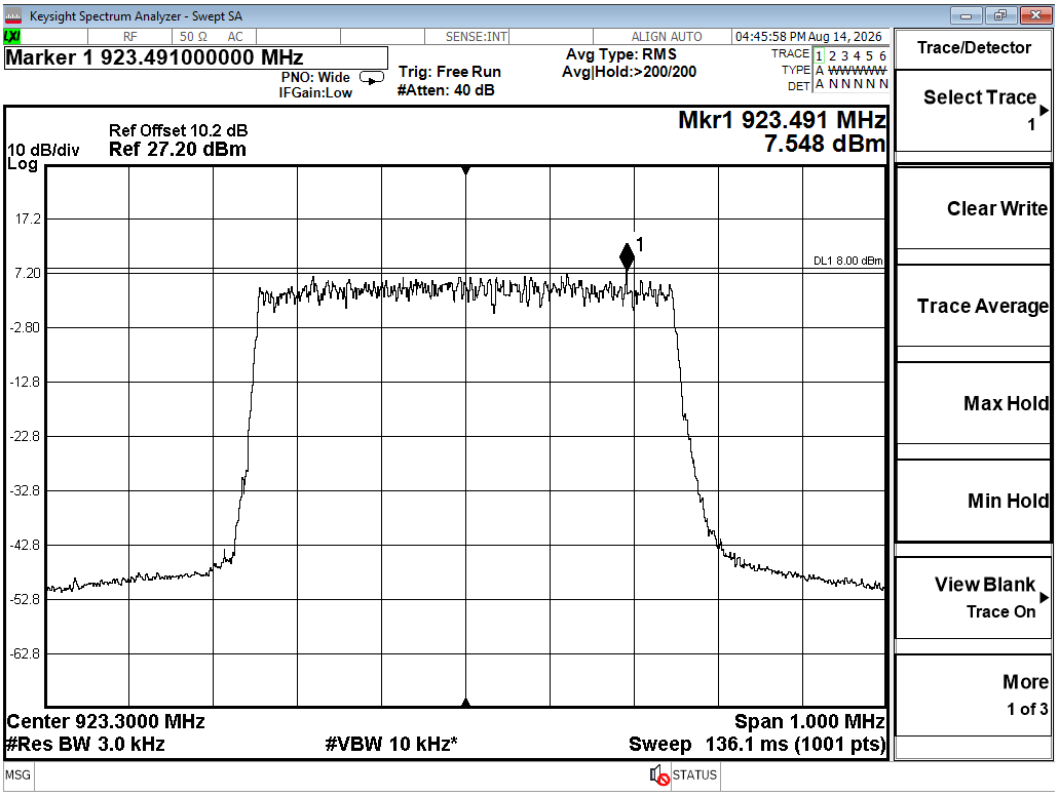
Screen Capture from Spectrum Analyzer: High Channel



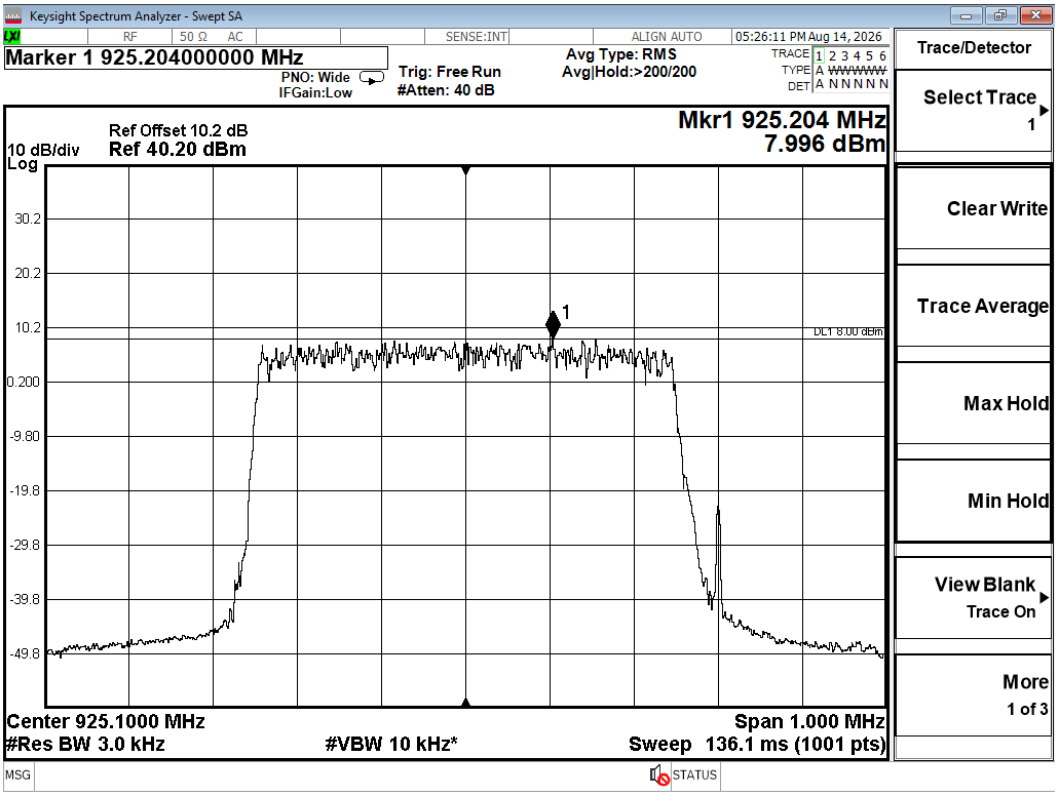
2.5.6 Average PSD Data: Port 1

Mode	Antenna Port	Channel	Frequency (MHz)	Average PSD (dBm)	Limit
LoRa 500 KHz	1	Low	923.3	7.548	≤ 8 / 3KHz
		Mid	925.1	7.996	
		High	927.5	7.953	

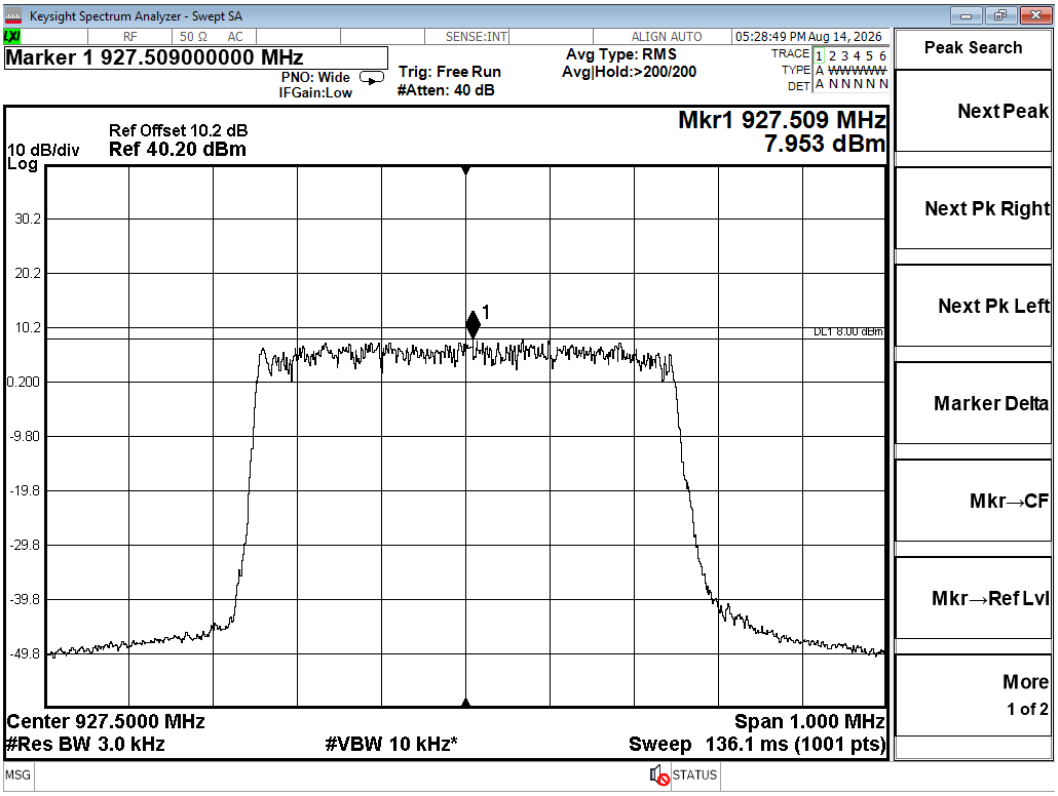
Screen Capture from Spectrum Analyzer: Low Channel



Screen Capture from Spectrum Analyzer: Mid Channel



Screen Capture from Spectrum Analyzer: High Channel



2.6 Conducted Spurious Emissions (Non-Restricted Band)

Test Lab: Electronics Test Centre, Airdrie	**EUT: Kona Mega Gen3 Gateway**
Test Personnel: Joseph Yumol	**Standard: FCC PART 15.247**
Date: 2026-08-14 (22.9°C, 44.54% RH)	**Basic Standard: ANSI C63.10 FCC OET KDB 558470 v04 DTS**

EUT status: Compliant

Specification: FCC Part 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.

2.6.1 Test Guidance: ANSI C63.10, Clause 6.7

This measurement is performed at the low, mid and high frequencies, with modulation.
The RF output of EUT with an antenna connector is fed to the input of the spectrum analyzer through appropriate attenuation. The loss from the cable and the attenuator were added on the analyzer as gain offset setting there by allowing direct measurements, without the need for any further corrections.
The spectrum analyzer is stepped through the spectrum in frequency spans selected to ensure acceptable frequency resolution. The RBW is set to 100 kHz. The VBW is set to ≥ 300 kHz. The Peak detector is used, with the trace set to Max Hold.

2.6.2 Deviations From The Standard:

There were no deviations from the EUT setup or methodology specified in the standard.

2.6.3 Test Equipment

Testing was performed with the following equipment:

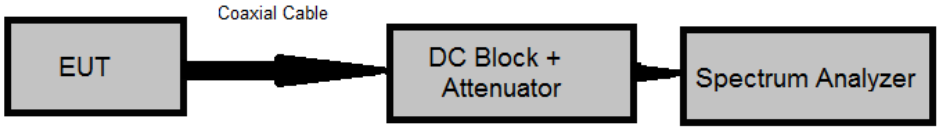
Equipment	Manufacturer	Model #	Asset #	Cal. Date	Cal. Due
EMI receiver	Agilent	N9038A (FW A.22.08)	6906	2026-02-17	2027-02-17
Temp/Humid Data Logger	LASCAR	EL-WIFI-TH	7033	2025-12-05	2026-12-05
Attenuator (DC to 26 GHz)	Mini-Circuits	BW-S10-2W263+	6933	2025-10-14	2027-10-14
Coaxial Cables (RF)	W.L. GORE	PGR01R01036	7024	2026-01-09	2027-01-09
DC Blocker (9 KHz - 27 GHz)	Centric RF	C0927 SMA	6987	2026-01-19	2027-01-19

2.6.4 Test Sample Verification, Configuration & Modifications

The EUT was set to a selected channel with test-specific software. The output was modulated as in normal operation.

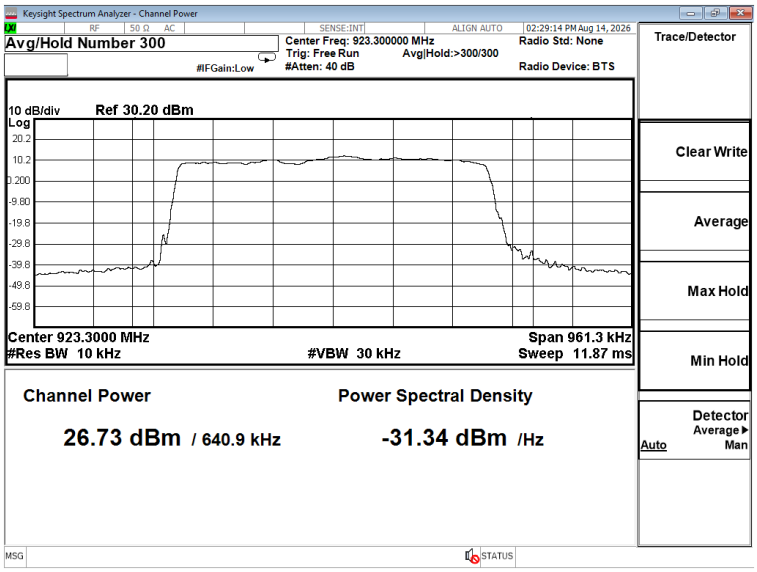
The EUT met the requirements without modification.

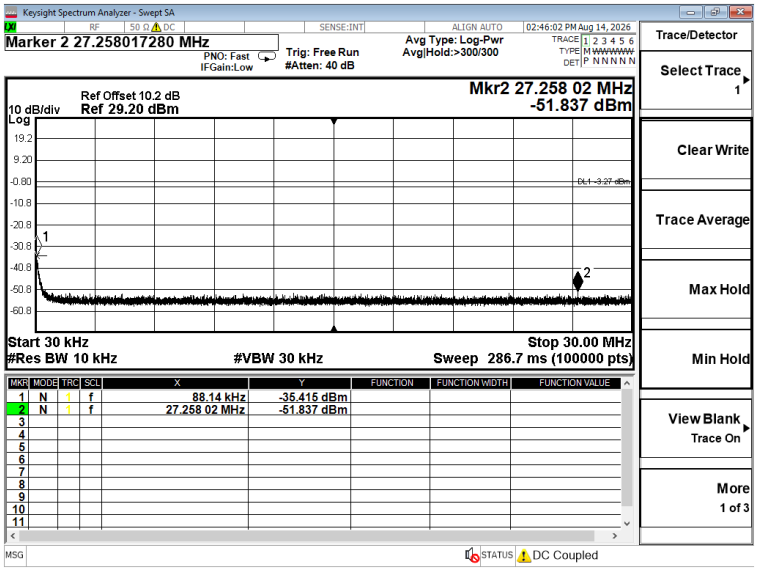
Test setup diagram for Conducted Spurious Emissions testing:

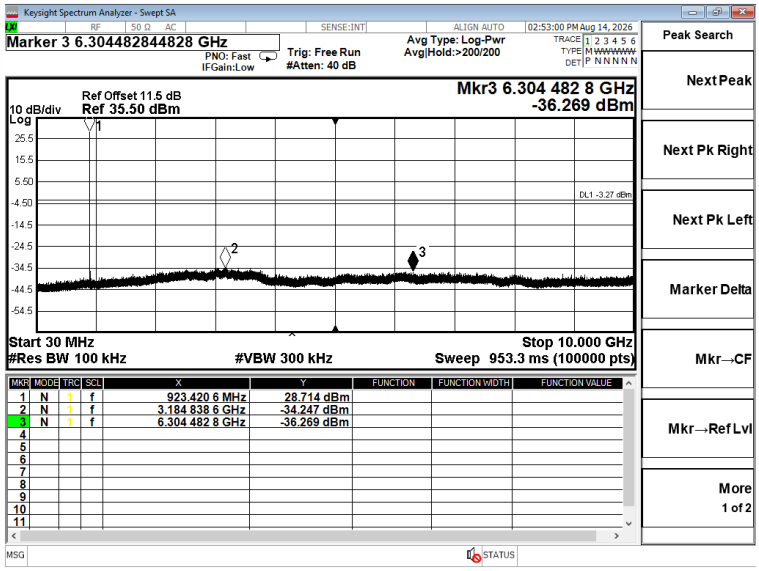


2.6.5 Conducted Emissions Data: ANT Port 0

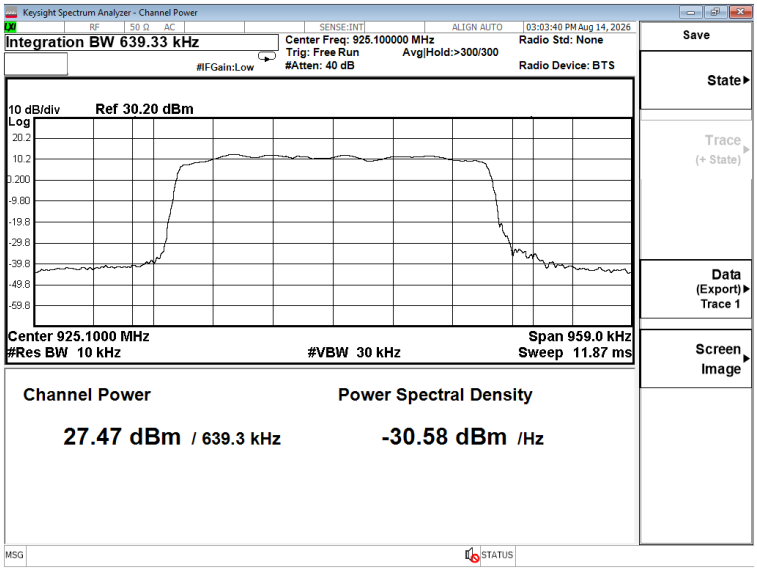
Low Channel

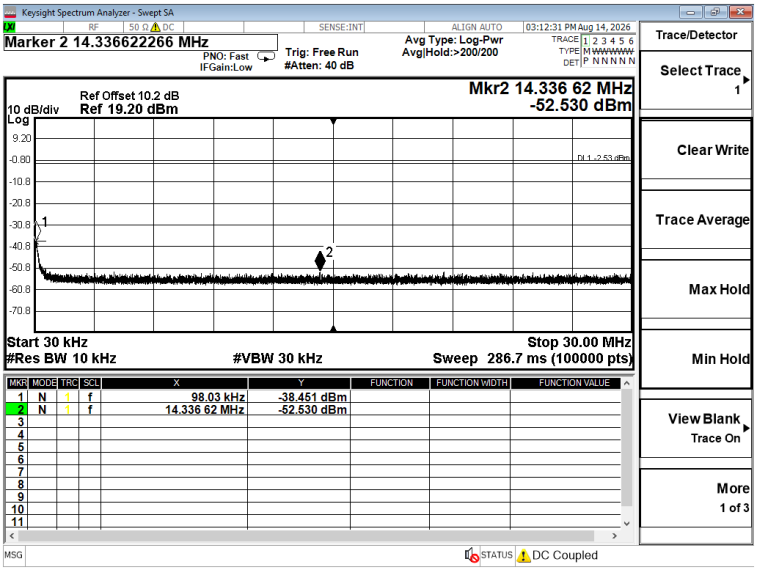


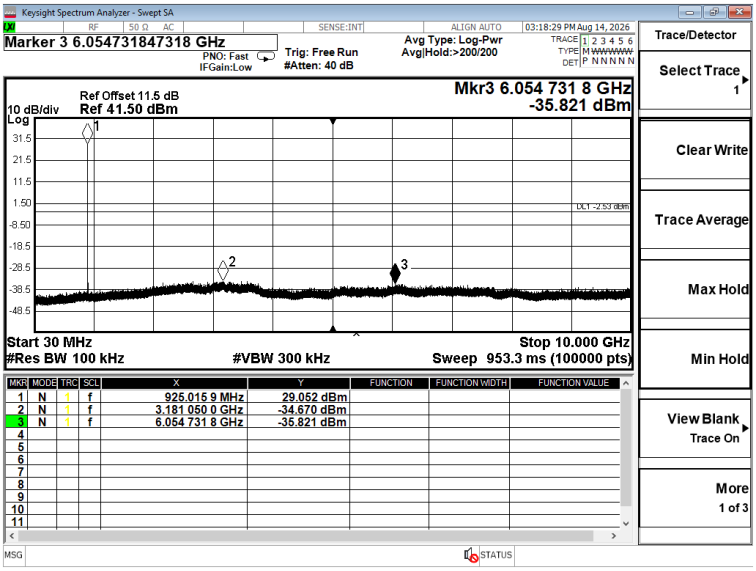




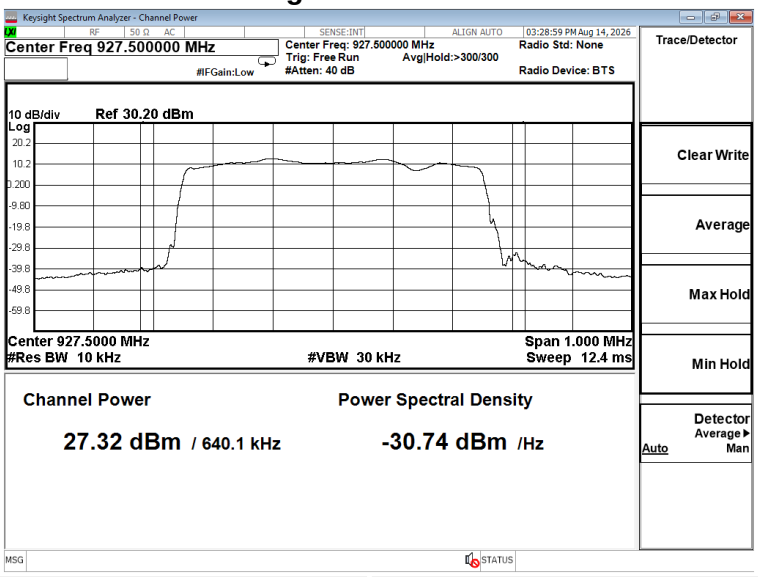
MID Channel

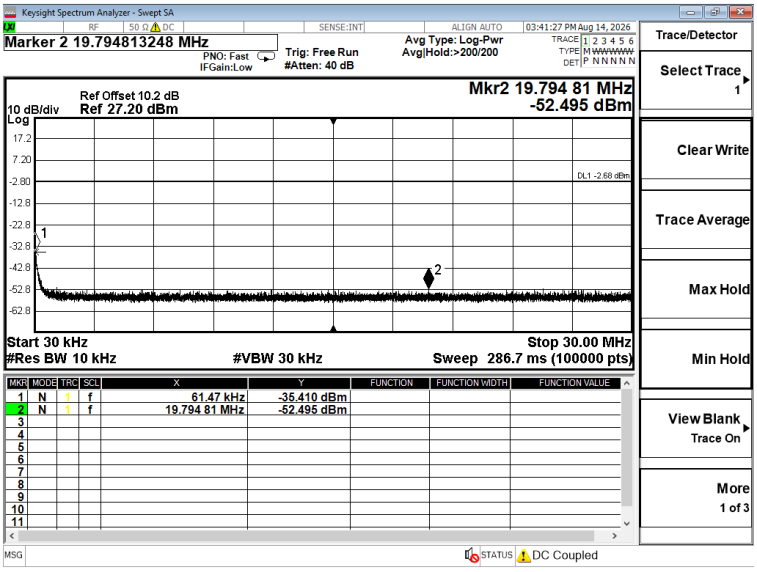

Keysight Spectrum Analyzer - Channel Power
Integration BW 639.33 kHz
Center Freq: 925.100000 MHz
Trig: Free Run
#Atten: 40 dB
Avg|Hold:>300/300
Radio Std: None
Radio Device: BTS
10 dB/div
Ref 30.20 dBm
Center 925.1000 MHz
#Res BW 10 kHz
#VBW 30 kHz
Span 959.0 kHz
Sweep 11.87 ms
Channel Power
27.47 dBm / 639.3 kHz
Power Spectral Density
-30.58 dBm /Hz
Save
State
Trace
Data
(Export)
Trace 1
Screen
Image

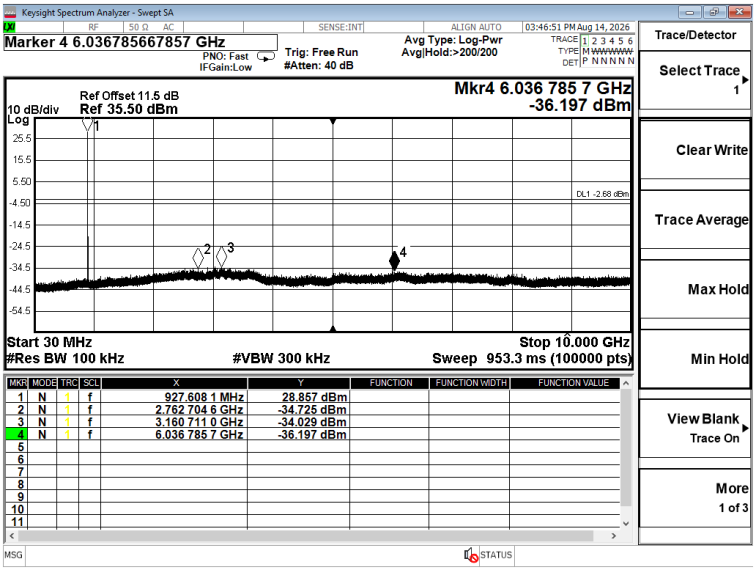

Keysight Spectrum Analyzer - Swept SA
Marker 2 14.336622266 MHz
Ref Offset 10.2 dB
10 dB/div
Ref 19.20 dBm
Mkr2 14.336 62 MHz
-52.530 dBm
Start 30 kHz
#Res BW 10 kHz
#VBW 30 kHz
Stop 30.00 MHz
Sweep 286.7 ms (100000 pts)
1 N 1 f 98.03 kHz -38.451 dBm
2 N 1 f 14.336 62 MHz -52.530 dBm
DC Coupled
Trace/Detector
Select Trace
Clear Write
Trace Average
Max Hold
Min Hold
View Blank
Trace On
More
1 of 3


Keysight Spectrum Analyzer - Swept SA
Marker 3 6.054731847318 GHz
Ref Offset 11.5 dB
10 dB/div
Ref 41.50 dBm
Mkr3 6.054 731 8 GHz
-35.821 dBm
Start 30 MHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 10.000 GHz
Sweep 953.3 ms (100000 pts)
1 N 1 f 925.015 9 MHz 29.052 dBm
2 N 1 f 3.181 050 0 GHz -34.670 dBm
3 N 1 f 6.054 731 8 GHz -35.821 dBm
Trace/Detector
Select Trace
Clear Write
Trace Average
Max Hold
Min Hold
View Blank
Trace On
More
1 of 3

High Channel

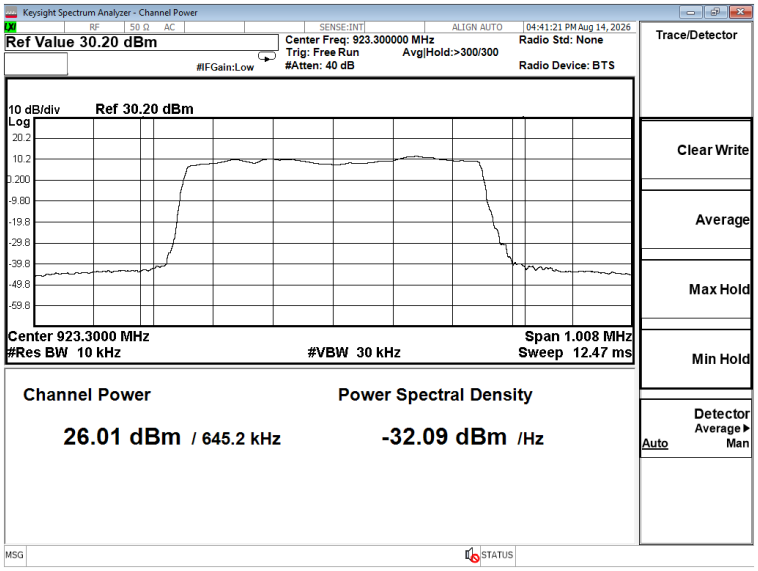


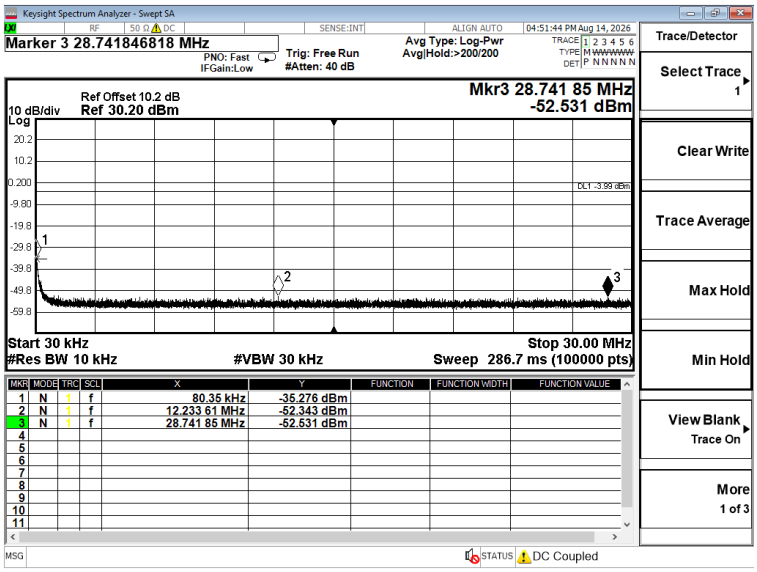


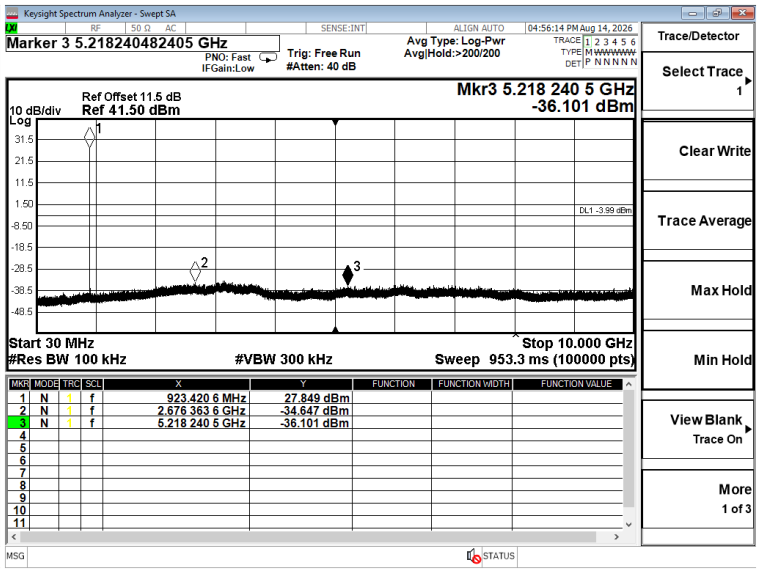


2.6.6 Conducted Emissions Data: ANT Port 1

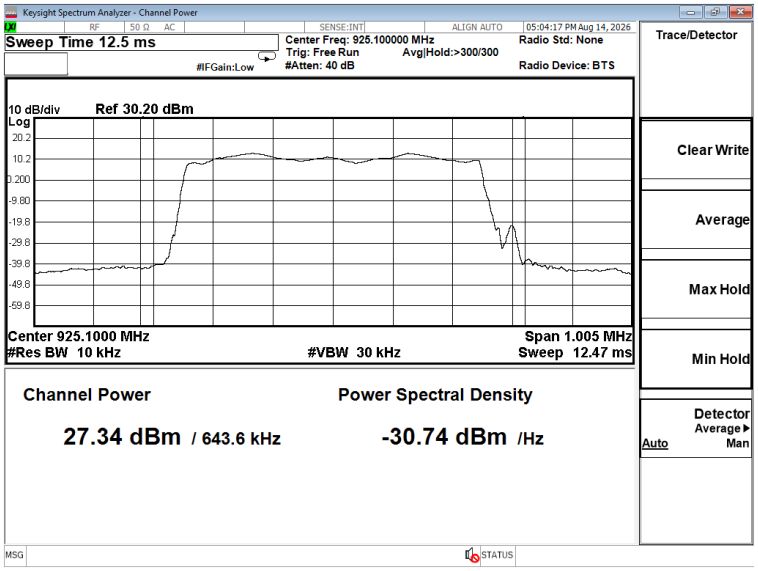
Low Channel

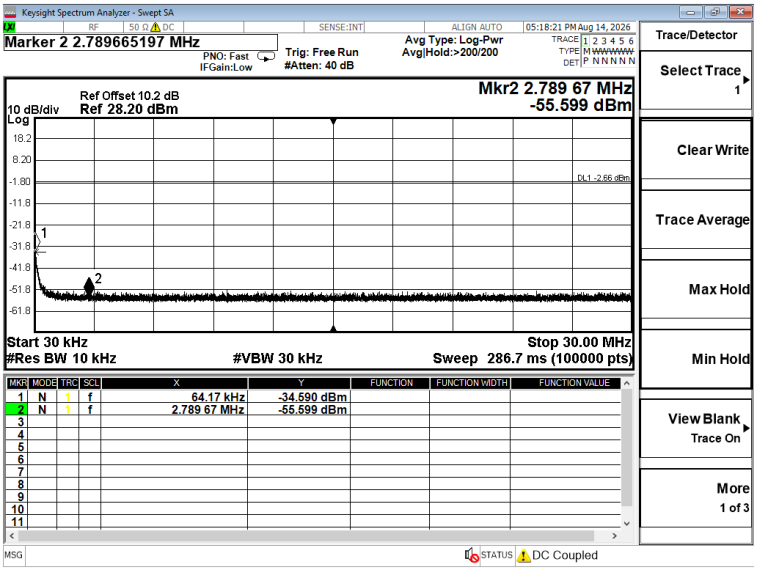


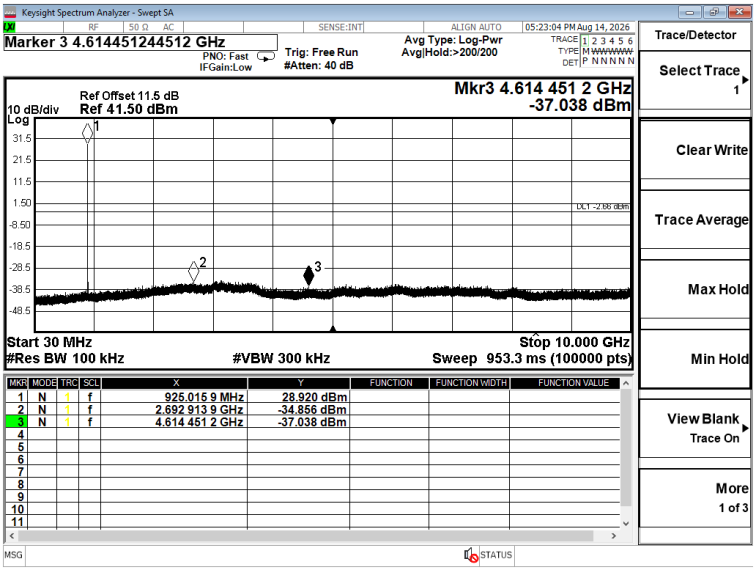




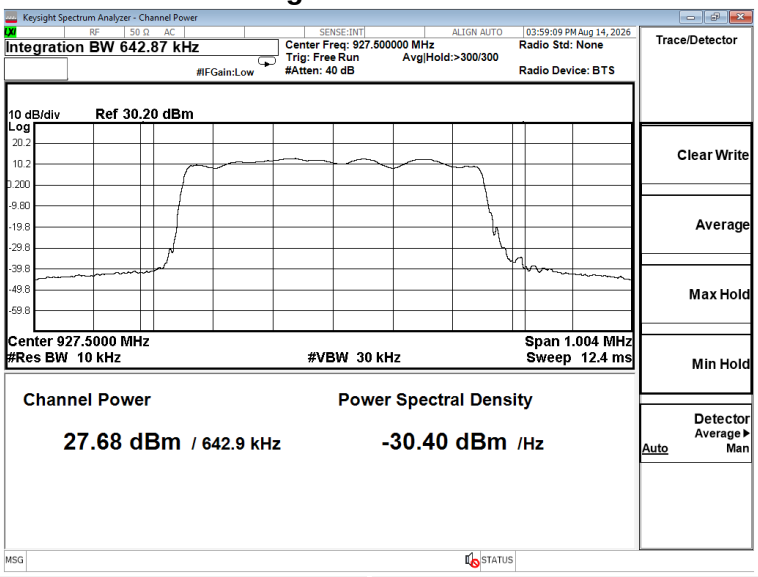
MID Channel

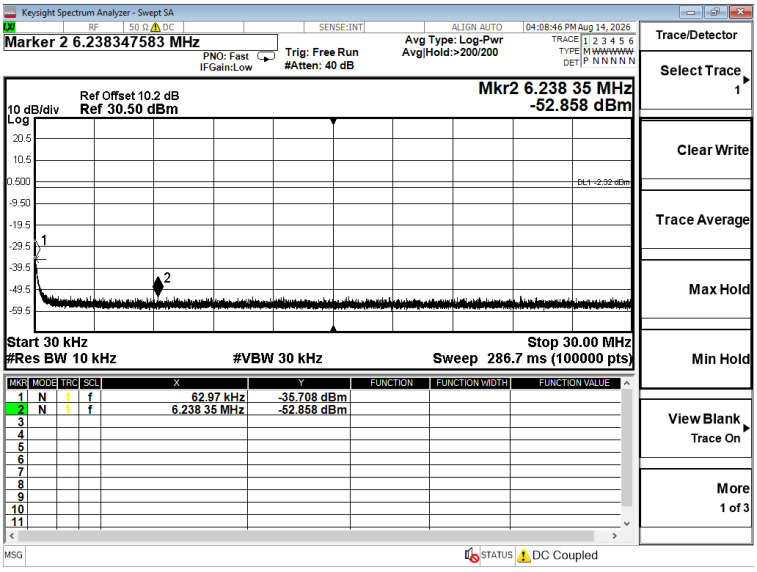

Keysight Spectrum Analyzer - Channel Power
Sweep Time 12.5 ms
Center Freq: 925.100000 MHz
Trig: Free Run
#Atten: 40 dB
Avg|Hold:>300/300
Radio Std: None
Radio Device: BTS
05:04:17 PM Aug 14, 2026
10 dB/div
Ref 30.20 dBm
Center 925.1000 MHz
#Res BW 10 kHz
#VBW 30 kHz
Span 1.005 MHz
Sweep 12.47 ms
Channel Power
27.34 dBm / 643.6 kHz
Power Spectral Density
-30.74 dBm /Hz
Trace/Detector
Clear Write
Average
Max Hold
Min Hold
Detector
Average
Auto
Man

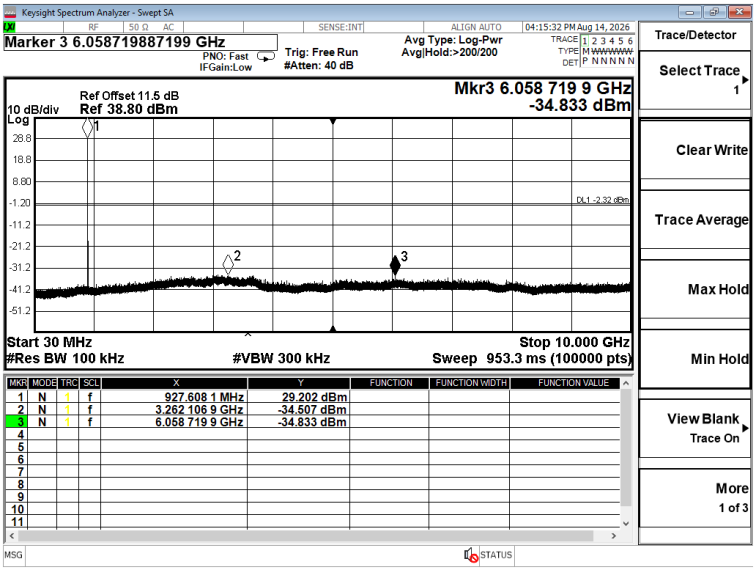

Keysight Spectrum Analyzer - Swept SA
Marker 2 2.789665197 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 40 dB
Avg Type: Log-Pwr
Avg|Hold:>200/200
05:18:21 PM Aug 14, 2026
Ref Offset 10.2 dB
10 dB/div
Ref 28.20 dBm
Mkr2 2.789 67 MHz
-55.599 dBm
Start 30 kHz
#Res BW 10 kHz
#VBW 30 kHz
Stop 30.00 MHz
Sweep 286.7 ms (100000 pts)
1 N 1 f 64.17 kHz -34.590 dBm
2 N 1 f 2.789 67 MHz -55.599 dBm
DC Coupled
Trace/Detector
Select Trace
Clear Write
Trace Average
Max Hold
Min Hold
View Blank
Trace On
More
1 of 3


Keysight Spectrum Analyzer - Swept SA
Marker 3 4.614451244512 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 40 dB
Avg Type: Log-Pwr
Avg|Hold:>200/200
05:23:04 PM Aug 14, 2026
Ref Offset 11.5 dB
10 dB/div
Ref 41.50 dBm
Mkr3 4.614 451 2 GHz
-37.038 dBm
Start 30 MHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 10.000 GHz
Sweep 953.3 ms (100000 pts)
1 N 1 f 925.015 9 MHz 28.920 dBm
2 N 1 f 2.692 913 9 GHz -34.856 dBm
3 N 1 f 4.614 451 2 GHz -37.038 dBm
Trace/Detector
Select Trace
Clear Write
Trace Average
Max Hold
Min Hold
View Blank
Trace On
More
1 of 3

High Channel





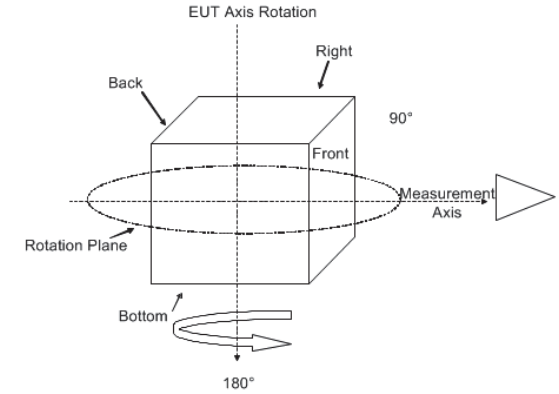


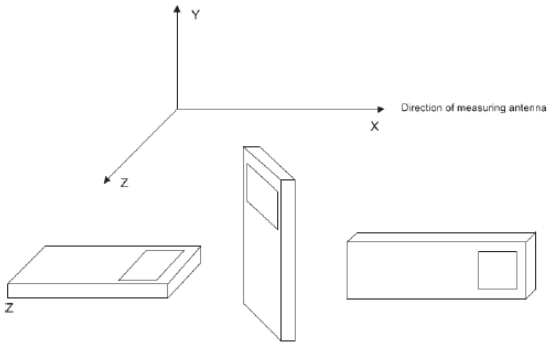
2.7 EUT Positioning Assessment

Test Lab: Electronics Test Centre, Airdrie	**EUT: Kona Mega Gen3 Gateway**
Test Personnel:	**Standard: FCC PART 15.247**
Date:	**Basic Standard: ANSI C63.4**
Comments: Fix Location	

Specification: ANSI C63.4, Clause 6.3.2.1

Portable, small, lightweight, or modular devices that may be handheld, worn on the body, or placed on a table during operation shall be positioned on a non-conducting platform, the top of which is 80 cm above the reference ground plane. The preferred area occupied by the EUT arrangement is 1 m by 1.5 m, but it may be larger or smaller to accommodate various sized EUTs (see Figure 6, Figure 7, and Figure 9). For testing purposes, ceiling- and wall-mounted devices also shall be positioned on a tabletop (see also 6.3.4 and 6.3.5). In making any tests involving handheld, body-worn, or ceiling-mounted equipment, it is essential to recognize that the measured levels may be dependent on the orientation (attitude) of the three orthogonal axes of the EUT. Thus, exploratory tests as specified in 8.3.1 shall be carried out for various axes orientations to determine the attitude having maximum or near-maximum emission level.





2.8 Radiated Spurious Emissions (within restricted band)

Test Lab: Electronics Test Centre, Airdrie	**EUT: Kona Mega Gen3 Gateway**
Test Personnel: Joseph Yumol	**Standard: FCC PART 15.247/15.209**
Date: 2026-08-15/17 (21.2°C, 31.8% RH)	**Basic Standard: ANSI C63.10**

EUT status: Compliant

Specification: FCC PART 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)).

Restricted Bands of Operation:

MHz	MHz	MHz	MHz	MHz	GHz	GHz
0.0900000 – 0.1100000	8.2910000 - 8.2940000	16.804250 - 16.804750	162.01250 - 167.17000 *	1660.0000 – 1710.0000	3.6000000 – 4.4000000	14.470000 – 14.500000
0.4950000 - 0.5050000 *	8.3620000 - 8.3660000	25.500000 - 25.670000	167.72000 - 173.20000 *	1718.8000 – 1722.2000	4.5000000 – 5.1500000	15.350000 – 16.200000
2.1735000 - 2.1905000	8.3762500 - 8.3867500	37.500000 - 38.250000	240.00000 – 285.00000	2200.0000 – 2300.0000	5.3500000 – 5.4600000	17.700000 – 21.400000
4.1250000 - 4.1280000	8.4142500 - 8.4147500	73.000000 - 74.600000	322.00000 - 335.40000	2310.0000 – 2390.0000	7.2500000 – 7.7500000	22.010000 – 23.120000
4.1772500 - 4.1777500	12.290000 - 12.293000	74.800000 - 75.200000	399.90000 – 410.00000	2483.5000 – 2500.0000 *	8.0250000 – 8.5000000	23.600000 – 24.000000
4.2072500 - 4.2077500	12.519750 - 12.520250	108.00000 - 121.94000 **	608.00000 – 614.00000	2655.0000 – 2900.0000	9.0000000 – 9.2000000	31.200000 – 31.800000
5.6770000 - 5.6830000	12.576750 - 12.577250	123.00000 - 138.00000 **	960.00000 – 1240.0000 ***	3260..0000 – 3267.0000	9.3000000 – 9.5000000	36.430000 – 36.500000
6.2150000 - 6.2180000	13.360000 - 13.410000	149.90000 - 150.05000 *	1300.0000 – 1427.0000 ***	3332.0000 – 3339.0000	10.600000 – 12.700000	Above 38.600000
6.2677500 - 6.2682500	16.420000 - 16.423000	156.52475- 156.52525	1435.0000 – 1626.5000	3345.8000 – 3358.0000	13.250000 – 13.400000	
6.3117500 - 6.3122500	16.694750 - 16.695250	156.70000 - 156.90000	1645.5000 – 1646.5000	3500.0000 – 3600.0000 ****		

* US only ** Canada 108 – 138 MHz *** Canada 960 – 1427 MHz **** Canada only

2.8.1 Test Guidance: ANSI C63.10, Clause 11.12(6.3, 6.5, 6.6)

From 9 kHz to 150 kHz (resolution bandwidth of 200 Hz) and from 150 kHz to 30 MHz (resolution bandwidth 9 kHz) measurements are performed with a loop antenna (as per KDB 460108).

From 30 MHz to 1000 MHz, measurements are performed with a broadband biconilog antenna and a resolution bandwidth of 120 kHz.

Above 1000 MHz, measurements are performed with a DRG Horn antenna or a Standard Gain horn, and a resolution bandwidth of 1 MHz. The EUT is raised to 150 cm above the ground plane, and the area between the EUT and the antenna mast is covered with RF absorbent material. The diameter of the illumination area is the dimension of the line tangent to the EUT formed by 3 dB beamwidth of the measurement antenna at the measurement distance of 3 meter. The antenna is pointed for both azimuth and elevation to maintain the receive antenna within (Bore Sight) the cone of radiation from the EUT.

The scan is performed at discreet increments of turntable azimuth and antenna height, which are selected in accordance with the applicable standard in order to assure capture of frequencies of interest. Optimization is performed based on the scan data.

Frequencies having peak emissions within 10dB of the limits are optimized. The EUT is rotated in azimuth over 360 degrees and the direction of maximum emission is noted.

Antenna height is varied from 1 – 4 meters at this azimuth to obtain the maximum emission. Then the maximum level is measured with the appropriate detector and recorded. Up to 1 GHz, measurements are performed with a Quasi-Peak detector. Above 1 GHz, measurements are recorded with Peak and/or Average detectors, as applicable.

2.8.2 Deviations From The Standard:

There were no deviations from the EUT setup or methodology specified in the standard.

2.8.3 Test Equipment

Testing was performed with the following equipment:

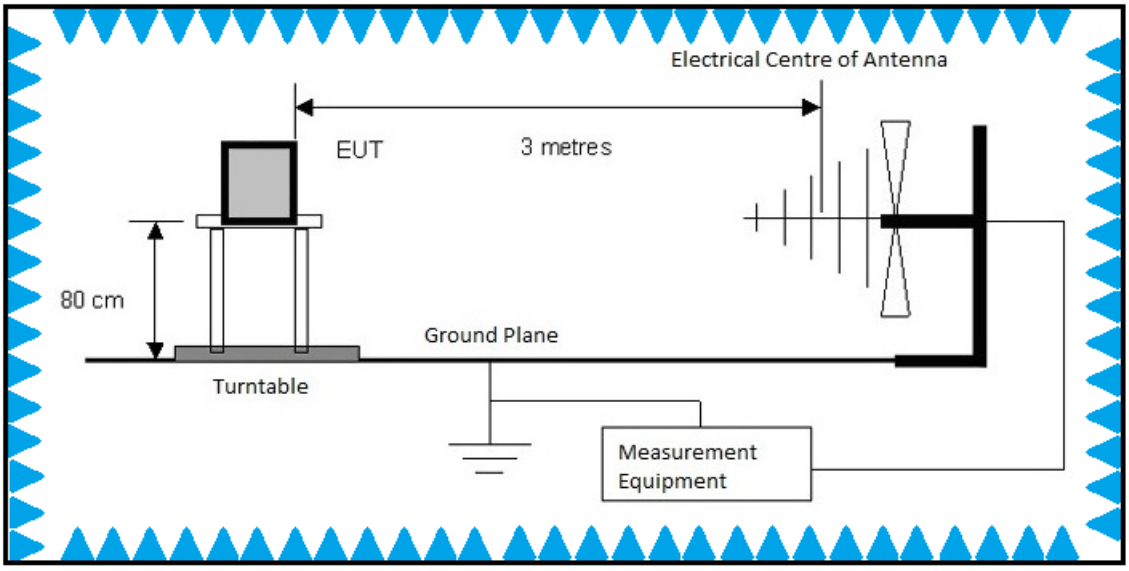
Equipment	Manufacturer	Model #	Asset #	Cal. Date (yyyy-mm-dd)	Cal. Due (yyyy-mm-dd)
EMC Software	UL	Ver. 9.5	SWC 021	N/A	
EMI receiver	Agilent	N9038A (FW A.22.08)	6906	2026-02-17	2027-02-17
Biconilog Antenna (30 – 1000 MHz)	AR	JB1	6905	2026-01-08	2027-01-08
DRG Horn (1 – 18 GHz)	EMCO	3115	19357	2025-11-18	2027-11-18
Temp/Humid Data Logger	LASCAR	EL-WIFI-TH	7033	2025-12-05	2026-12-05
Pre-Amplifier (30 – 1400 MHz)	HP	8447D	9291	2026-01-21	2027-01-21
L.N. Amplifier (1 – 18 GHz)	MITEQ	JS43-01001800-21-5P	4354	2026-01-21	2027-01-21
RE Cable below 1GHz	Insulated Wire Inc.	KPS-1501A-3600-KPA-01102006	4419	2026-01-21	2027-01-21
Re Cable Above 1 GHz	A.H. System Inc.	SAC-26G-8.23	6187	2026-01-21	2027-01-21
0.9GHz Notch Filter	Microtronics	BRM20784	6947	2026-01-05	2027-01-05

2.8.4 Test Sample Verification, Configuration & Modifications

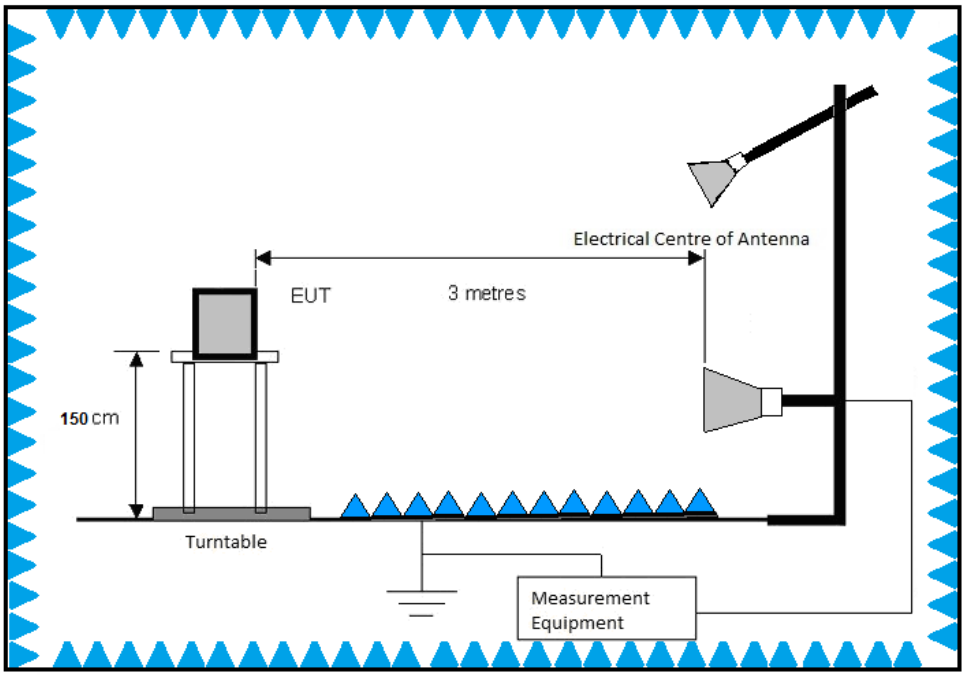
The EUT was set to a selected channel with test-specific software. The output was modulated as in normal operation.

The EUT met the requirements without modification.

Test setup diagram for Radiated Spurious Emissions testing (below 1GHz):



Test setup diagram for Radiated Spurious Emissions testing (above 1GHz):



2.8.5 Radiated Emissions Data: Port0

The emissions data are presented in tabular form, showing turntable azimuth, antenna height and polarization, the uncorrected spectrum analyzer reading, the correction factors applied, the net result, the value of the limit at the frequency investigated, and the Delta between the result and the limit.

Meter Reading in dBμV + Antenna Factor in dB/m + Gain/Loss Factor in dB = Corrected Field Strength in dbμV/m.

Delta = Field Strength – Limit

Notes:

- When a preamp is used, the resulting gain is compensated, producing a negative value for the Cable Loss.
- Measurements reported are the result of adjusting the turntable azimuth and antenna height to obtain the maximum EUT emission. This may produce a different reading than the plot trace. The plot is a Peak Hold function obtained at discreet increments of height and azimuth, while the reported measurement is obtained with the appropriate Quasi Peak or Average detector after the height and azimuth have been adjusted for maximum emission.
- In Transmit mode, the EUT was assessed up to 10.0 GHz.

Negative values for Delta indicate compliance.

Freq. Marker	Freq. [MHz]	Raw reading[dBμv]	Det	Antenna Factor [dB/m]	Pre amp Gain [dB]	Corrected Reading [dBμv/m]	FCC 15.209 Limit [dBμv/m]	Delta [dB]	Azimuth [Deg]	Height [cm]	Polarization
LOW Channel – 923.3 MHz											
1	[1]34.646	40.00	QP	21.80	-24.70	37.10	40.00	-2.90	16	117	Vertical
2	*112.83	40.76	QP	17.30	-23.30	34.76	43.52	-8.76	355	100	Vertical
1	*2347.4	52.87	PK	28.10	-39.40	41.57	74	-32.43	123	116	Vertical
		41.82	Av			30.52	54	-23.48			
MID Channel – 925.1 MHz											
1	*1586.5	51.15	PK	25.40	-39.10	37.45	74	-36.55	97	151	Horizontal
		41.85	Av			28.15	54	-25.85			
2	*1585.9	59.68	PK	25.40	-39.10	45.98	74	-28..02	340	143	Vertical
		48.69	Av			34.99	54	-19.01			
3	*2379.8	53.19	PK	28.20	-39.40	41.99	74	-32.01	85	130	Vertical
		41.63	Av			30.43	54	-23.57			
High Channel – 927.5 MHz											
1	*132.33	32.31	QP	18.10	-23.10	27.31	43.52	-16.21	161	100	Horizontal
1	*1586.3	50.11	PK	25.40	-39.10	36.41	74	-17.59	339	309	Horizontal
		38.54	Av			24.84	54	-29.16			
2	*1585.9	60.04	PK	25.40	-39.10	46.34	74	-27.65	330	216	Vertical
		49.02	Av			35.32	54	-18.68			
3	*2379.2	52.32	PK	28.20	-39.40	41.12	74	-32.88	65	101	Vertical
		42.14	Av			30.94	54	-23.06			

QP: Quasi-Peak Detector, PK: Peak Detector, AV: Average Detector

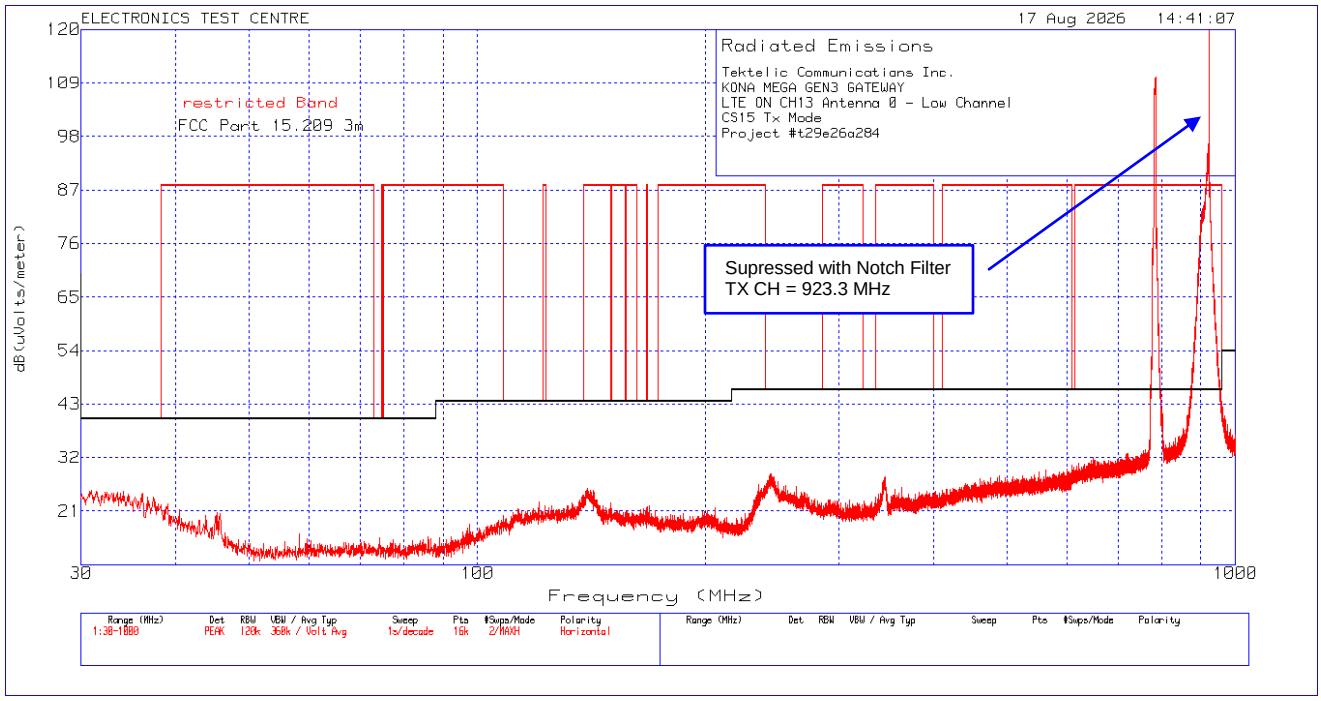
*** Spurious Emission fall in Restricted Band**

[1] Spurious emission not falling in restricted bands.

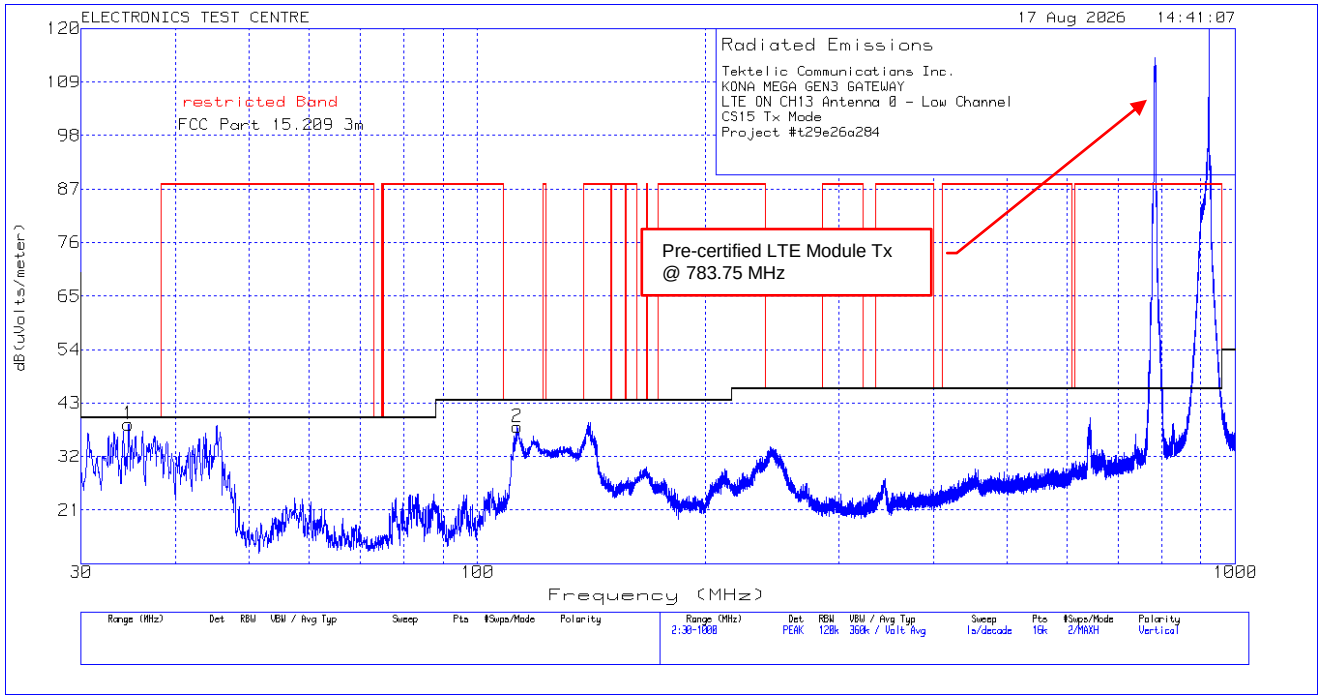
LOW Channel

Below 30 MHz Radiated Emission is more than 20 dB below the specified limit.

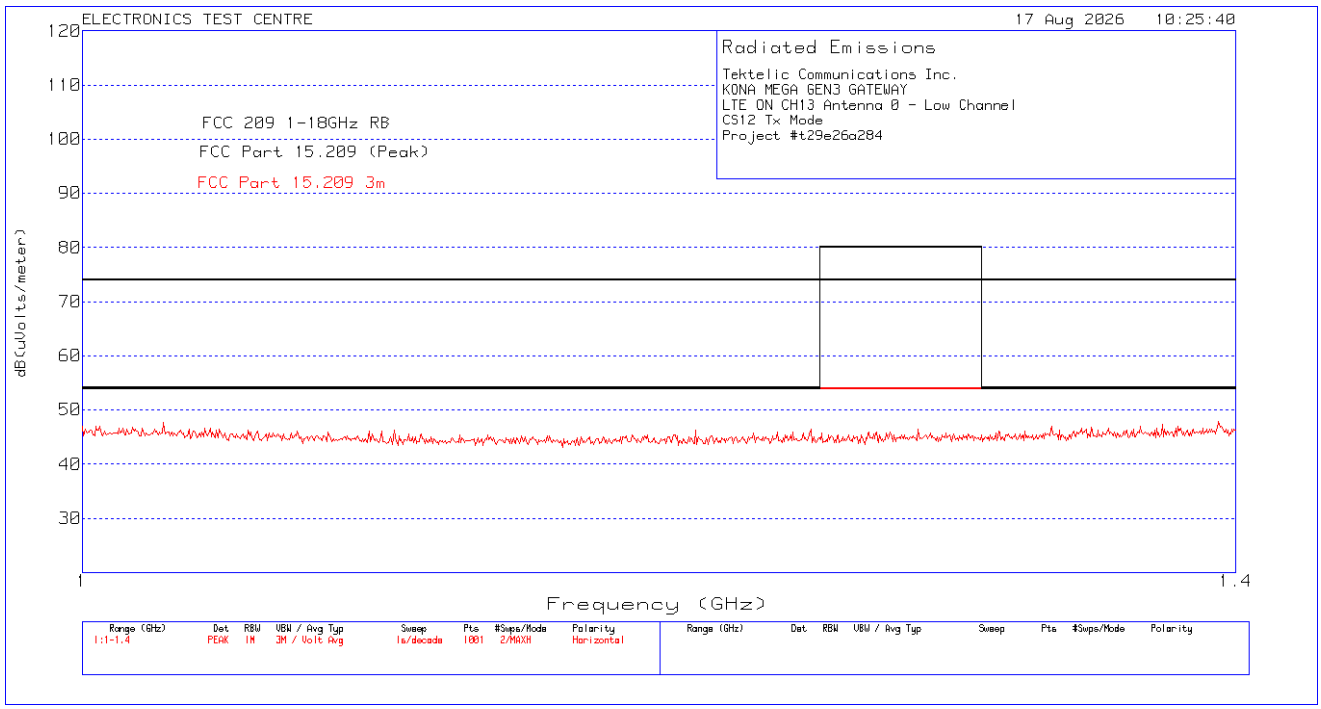
Plot of Radiated Emissions: Horizontal polarization



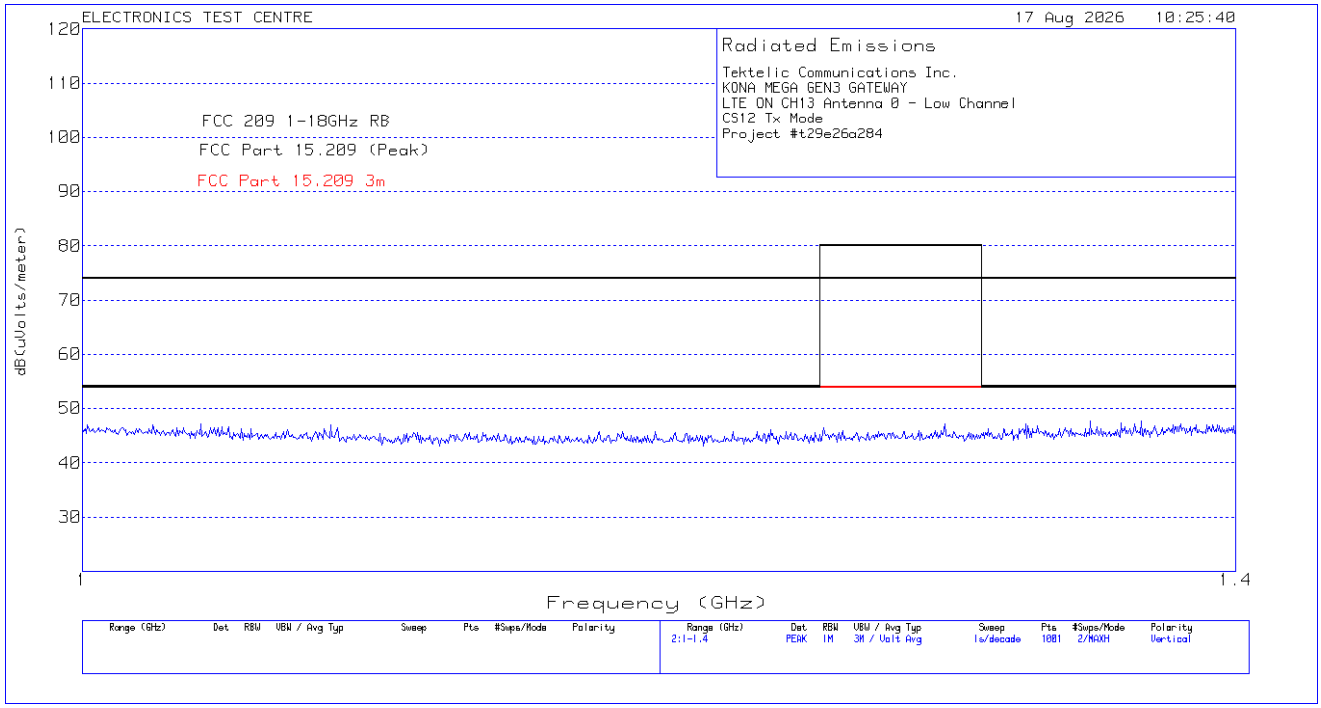
Plot of Radiated Emissions: Vertical polarization



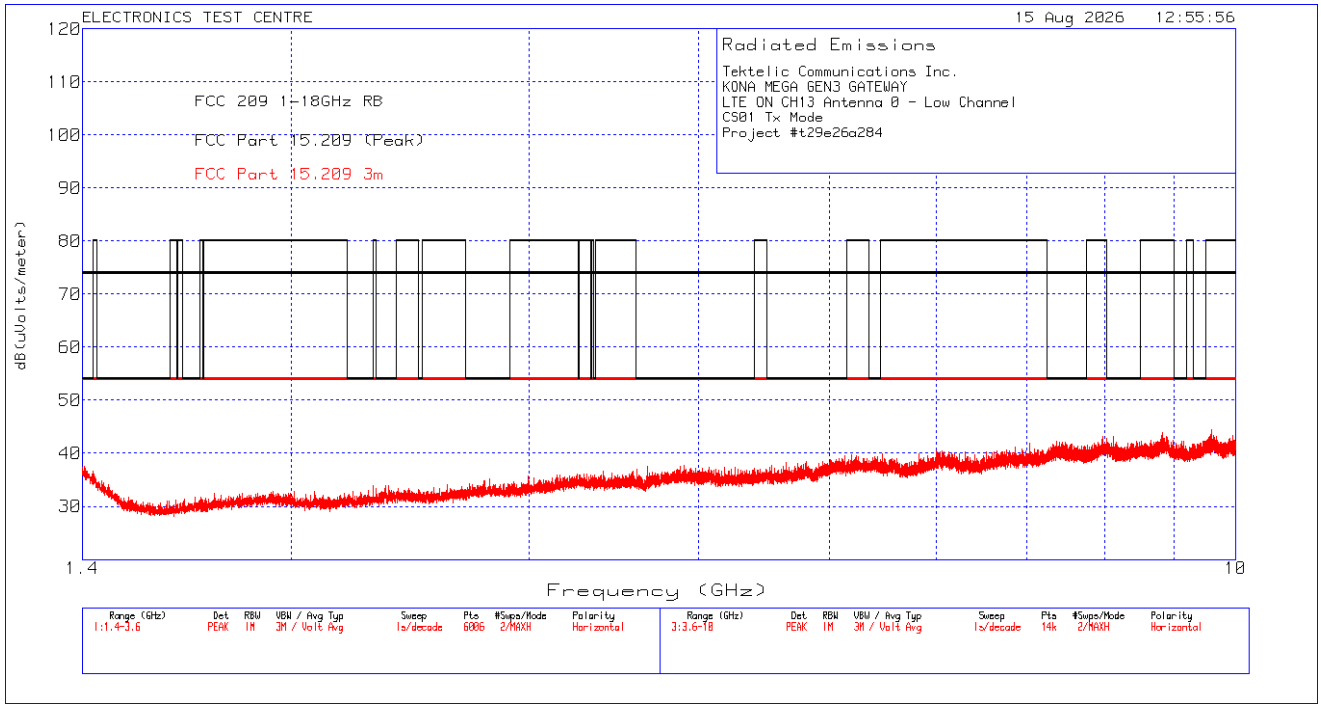
Plot of Radiated Emissions: Horizontal polarization



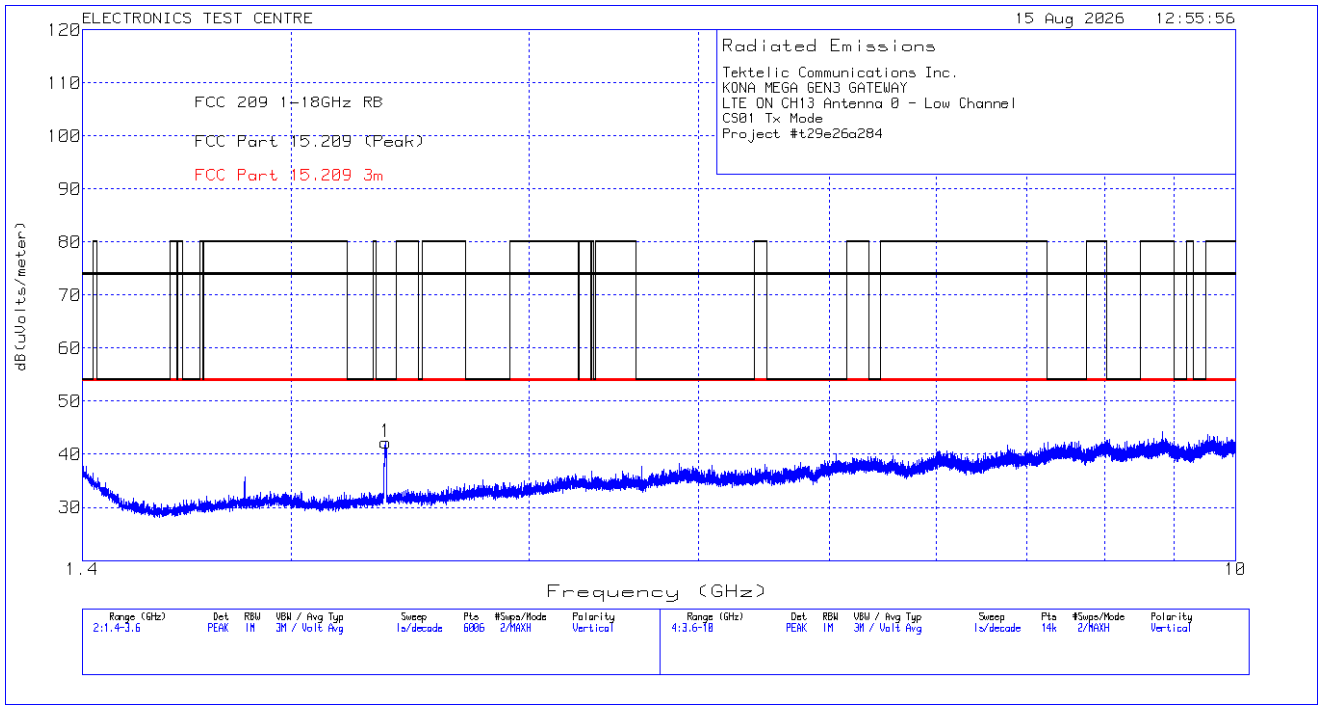
Plot of Radiated Emissions: Vertical polarization



Plot of Radiated Emissions: Horizontal polarization



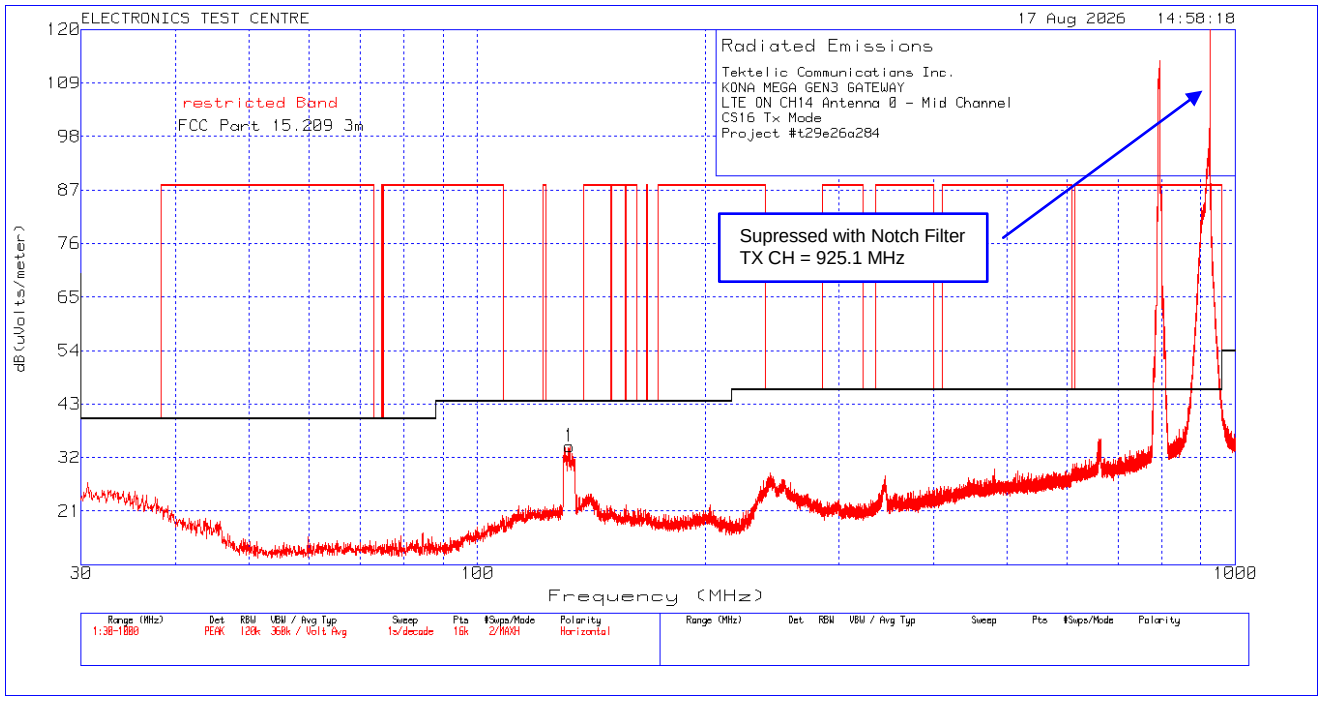
Plot of Radiated Emissions: Vertical polarization



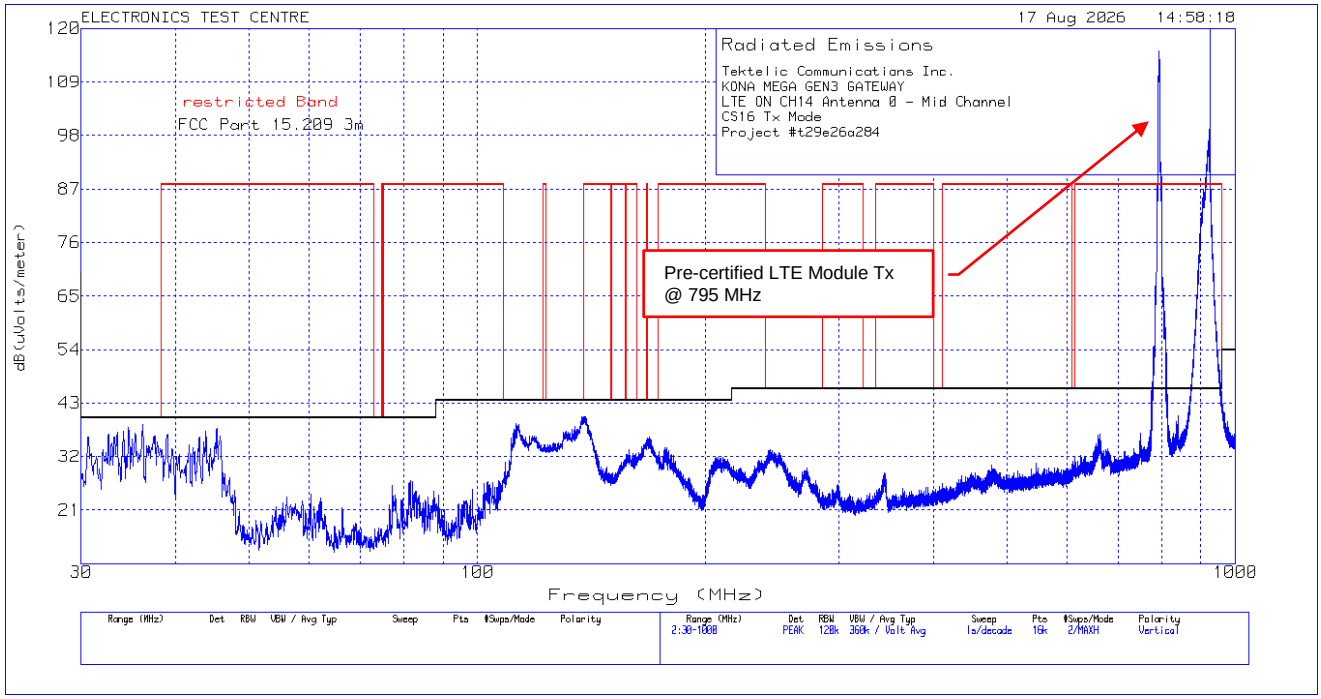
MID Channel

Below 30 MHz Radiated Emission is more than 20 dB below the specified limit.

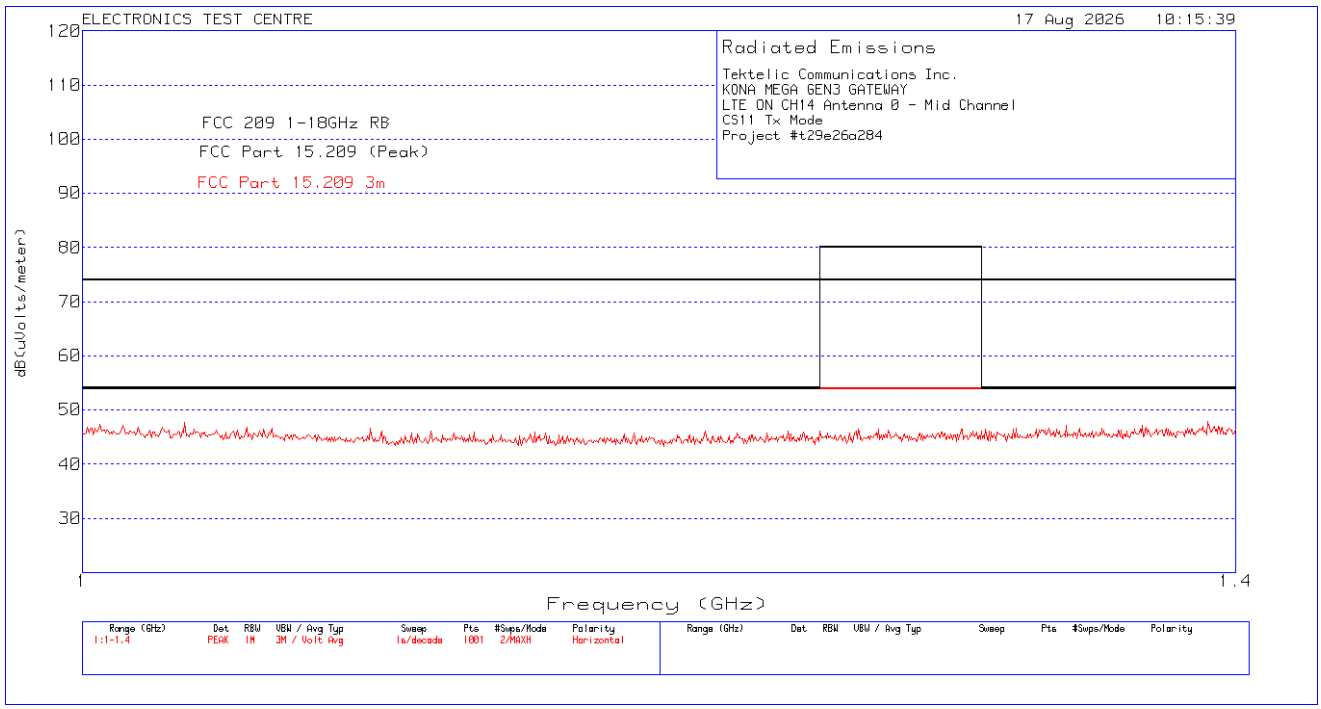
Plot of Radiated Emissions: Horizontal polarization



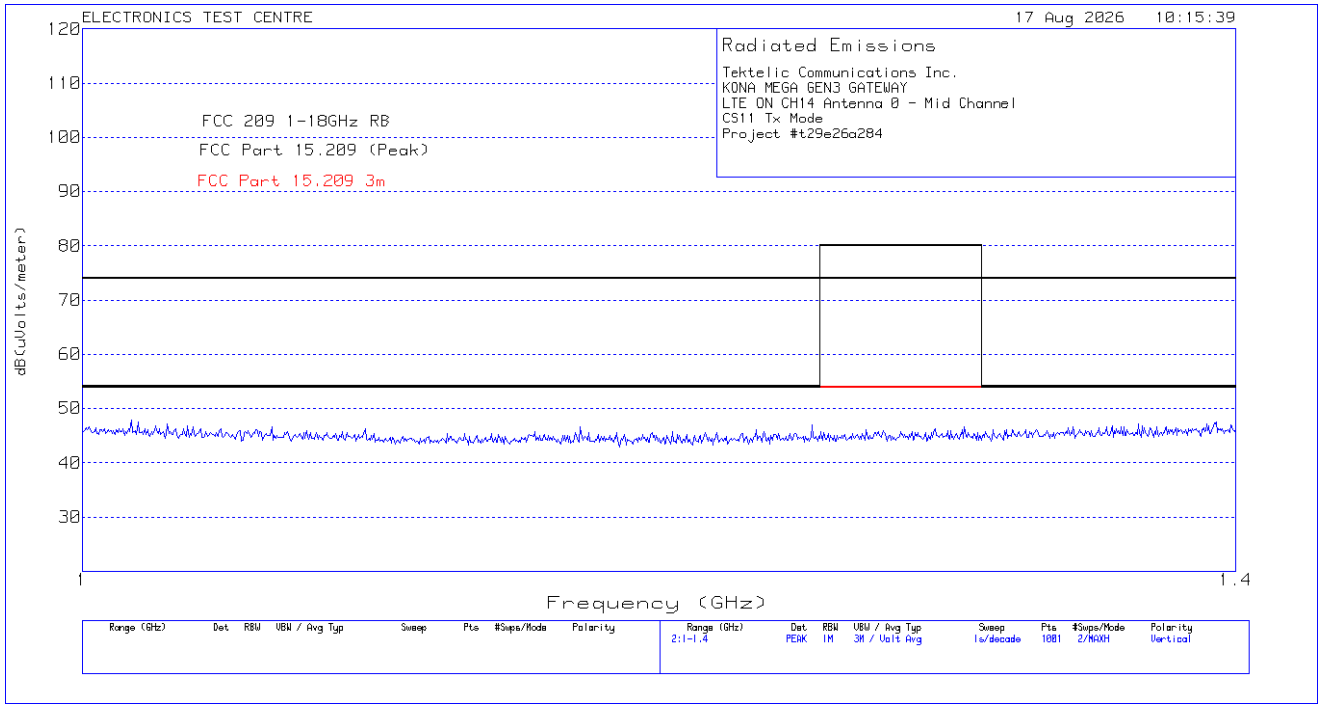
Plot of Radiated Emissions: Vertical polarization



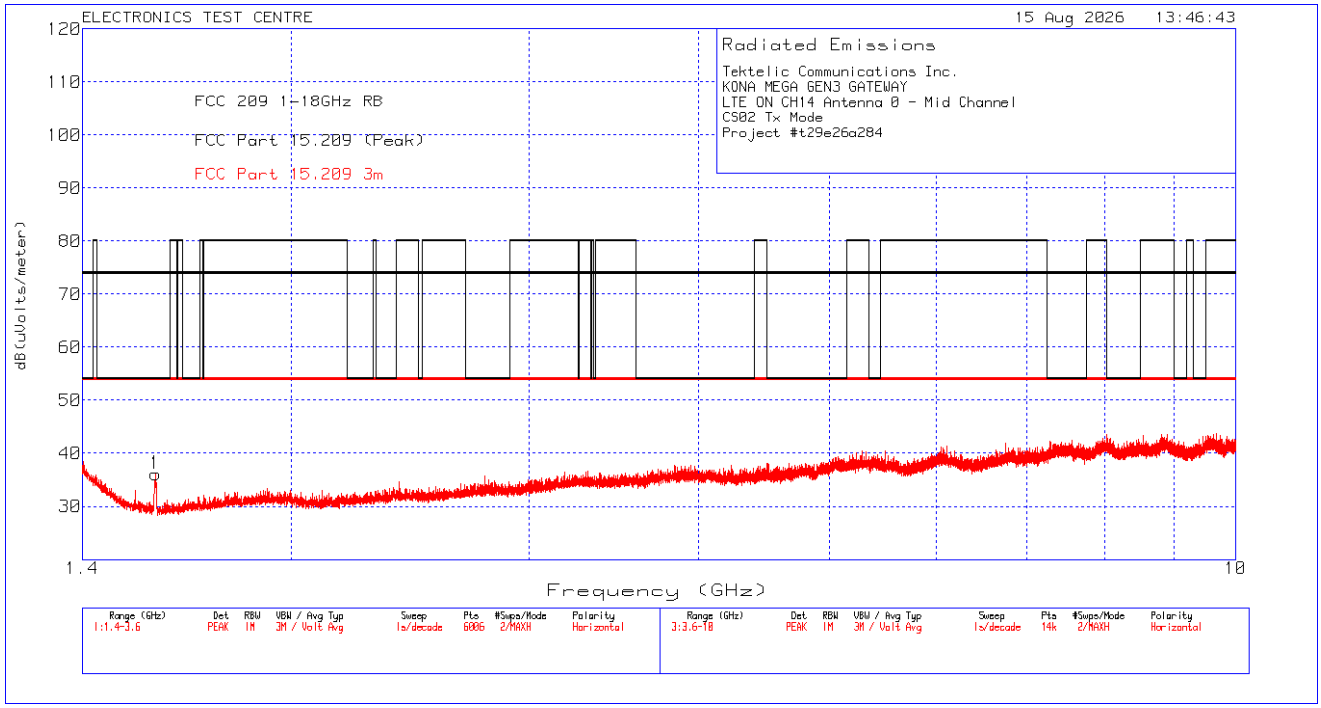
Plot of Radiated Emissions: Horizontal polarization



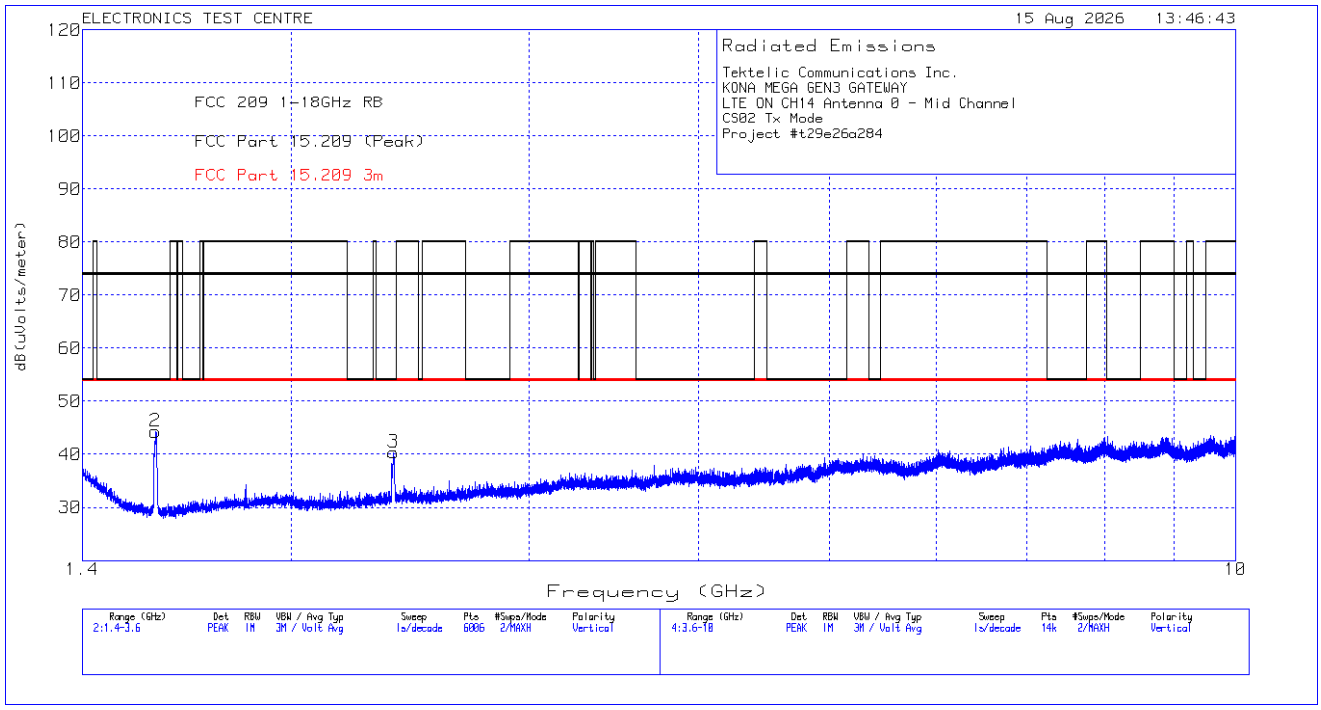
Plot of Radiated Emissions: Vertical polarization



Plot of Radiated Emissions: Horizontal polarization



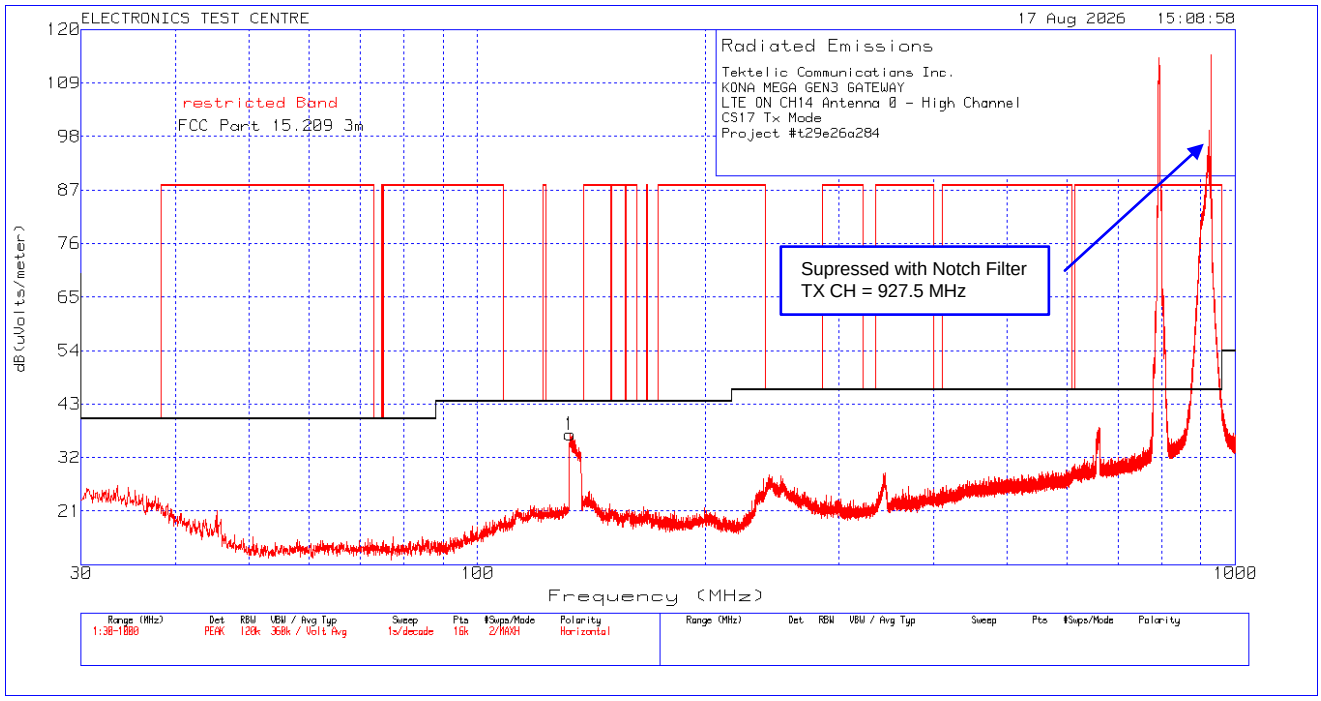
Plot of Radiated Emissions: Vertical polarization



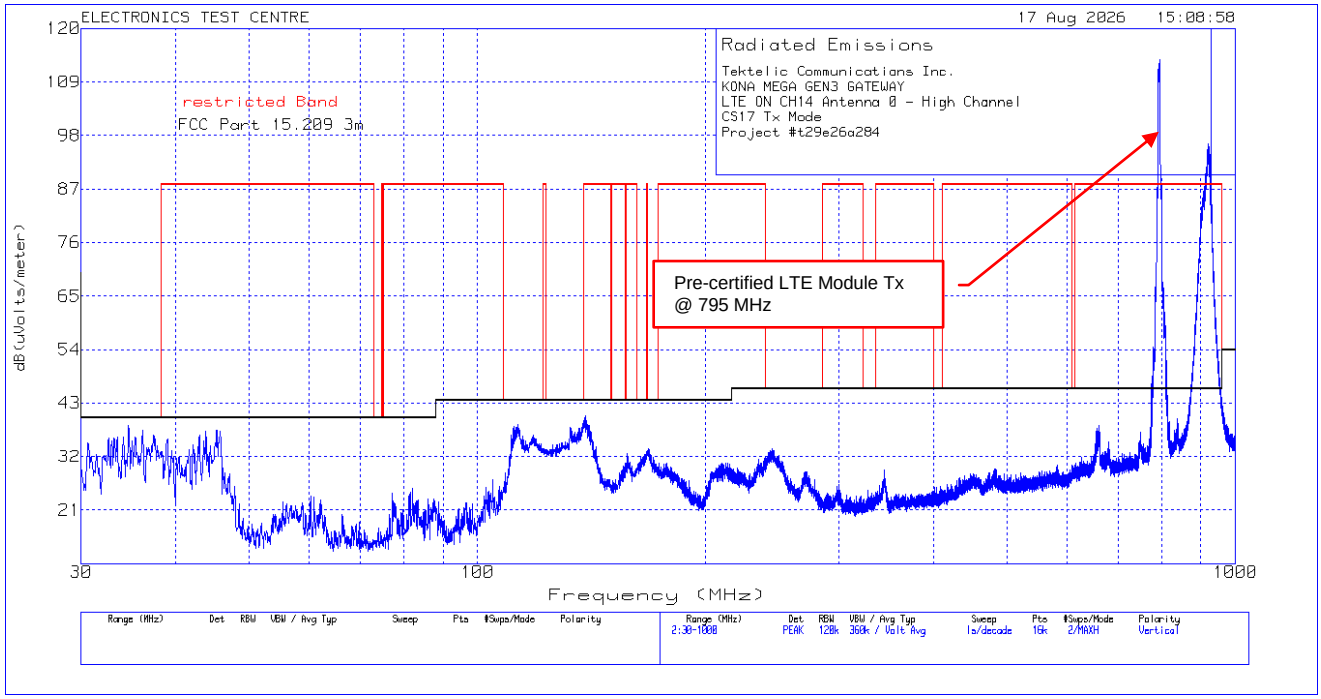
High Channel

Below 30 MHz Radiated Emission is more than 20 dB below the specified limit.

Plot of Radiated Emissions: Horizontal polarization

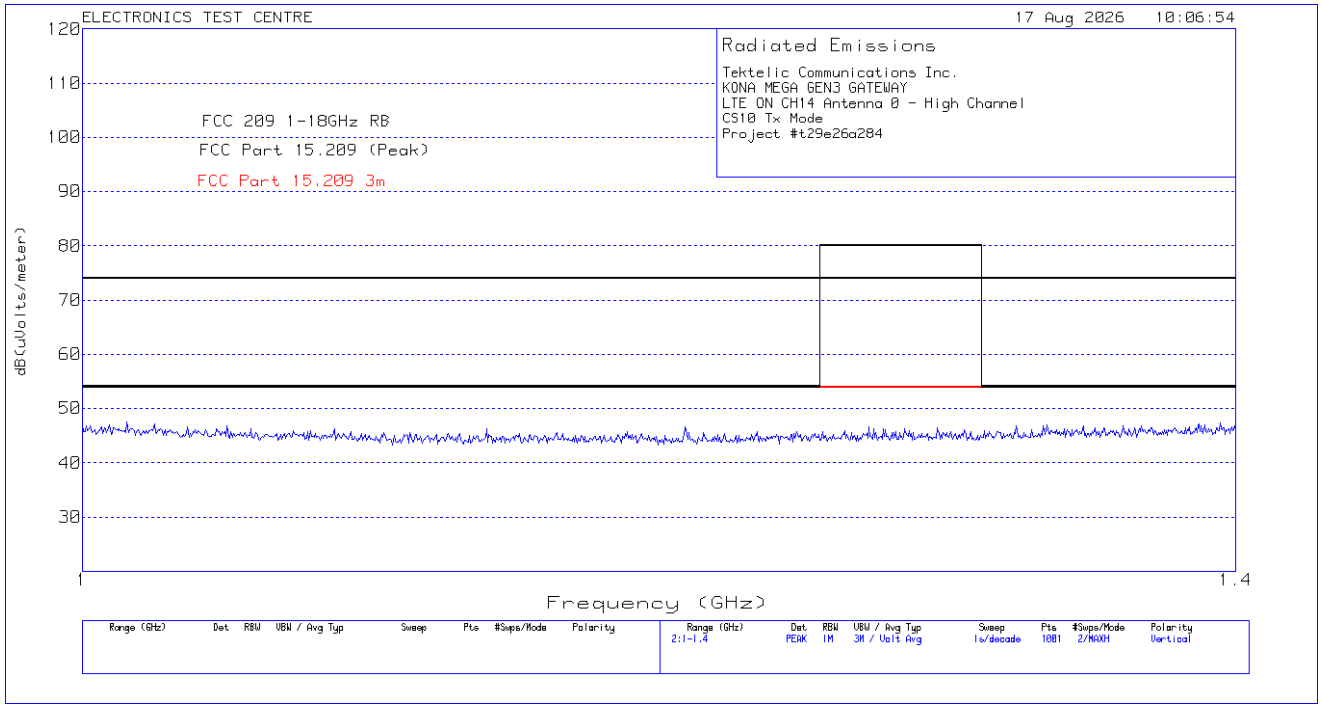


Plot of Radiated Emissions: Vertical polarization

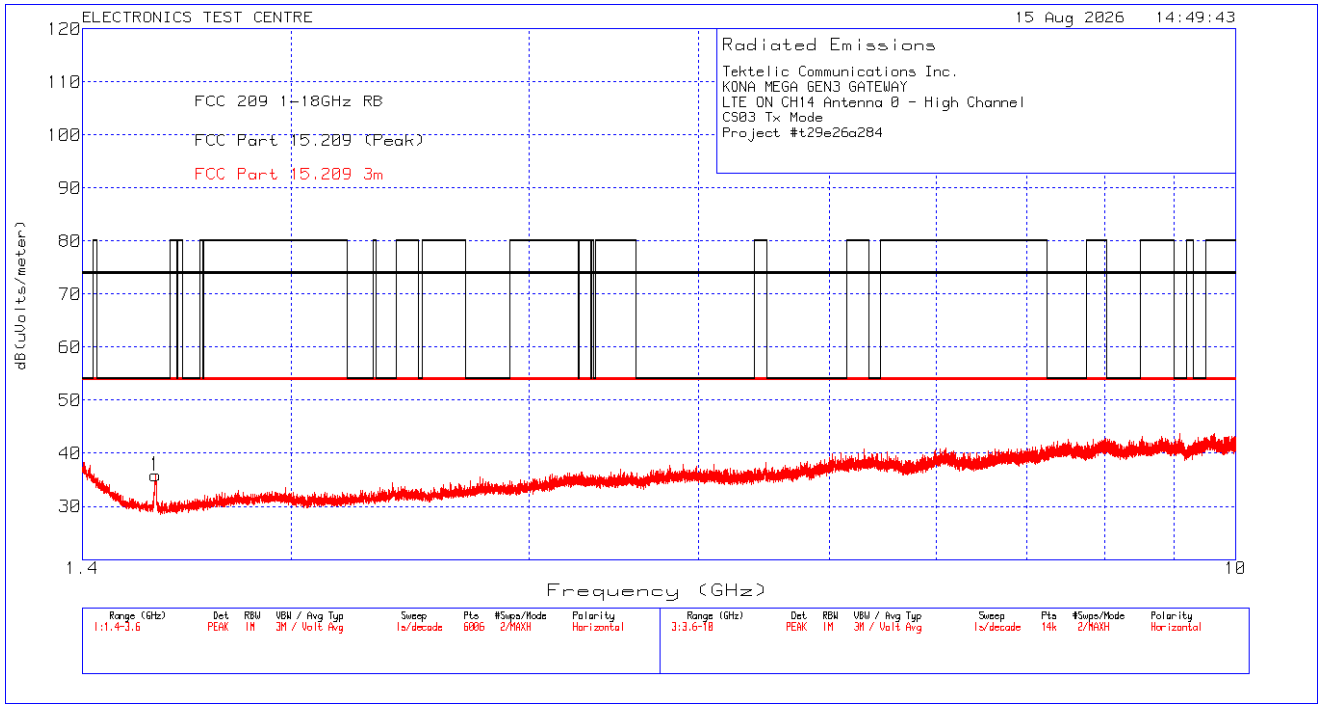


Plot of Radiated Emissions: Horizontal polarization

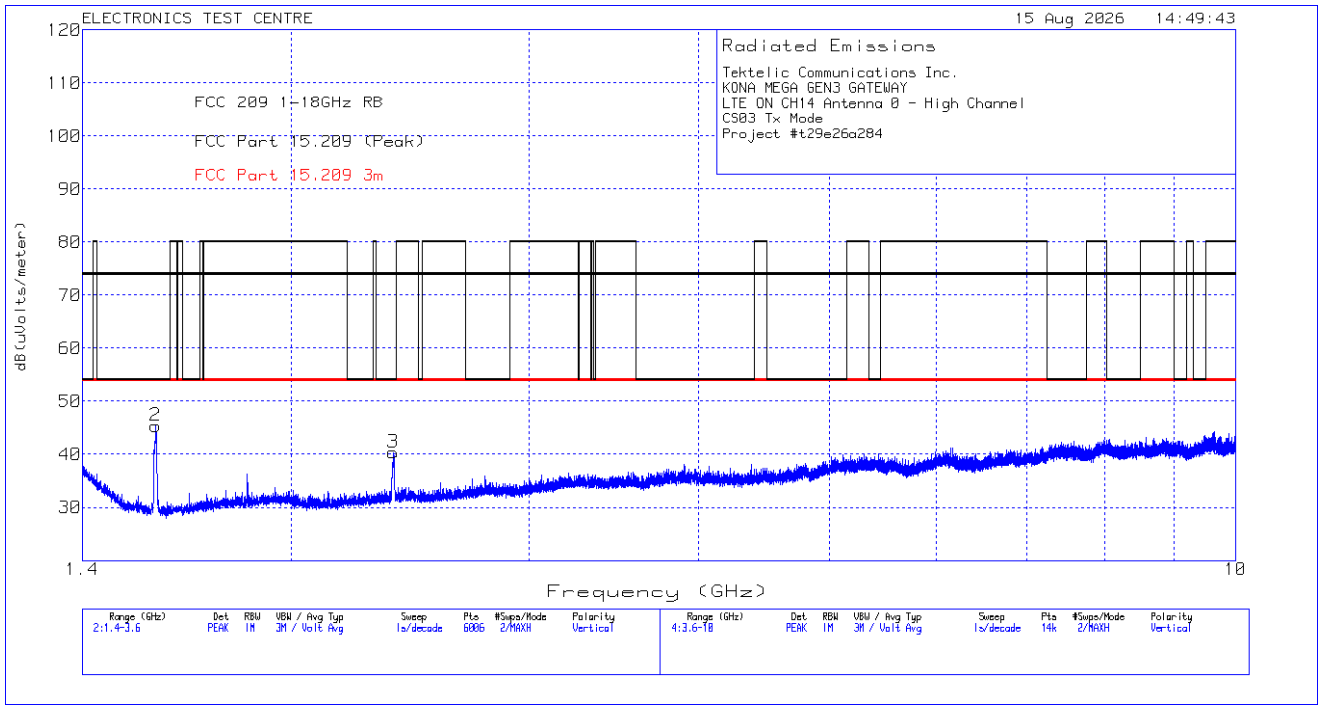
Plot of Radiated Emissions: Vertical polarization



Plot of Radiated Emissions: Horizontal polarization



Plot of Radiated Emissions: Vertical polarization



2.8.6 Radiated Emissions Data: Port1

The emissions data are presented in tabular form, showing turntable azimuth, antenna height and polarization, the uncorrected spectrum analyzer reading, the correction factors applied, the net result, the value of the limit at the frequency investigated, and the Delta between the result and the limit.

Meter Reading in dBμV + Antenna Factor in dB/m + Gain/Loss Factor in dB = Corrected Field Strength in dbμV/m.

Delta = Field Strength – Limit

Notes:

- When a preamp is used, the resulting gain is compensated, producing a negative value for the Cable Loss.
- Measurements reported are the result of adjusting the turntable azimuth and antenna height to obtain the maximum EUT emission. This may produce a different reading than the plot trace. The plot is a Peak Hold function obtained at discreet increments of height and azimuth, while the reported measurement is obtained with the appropriate Quasi Peak or Average detector after the height and azimuth have been adjusted for maximum emission.
- In Transmit mode, the EUT was assessed up to 10.0 GHz.

Negative values for Delta indicate compliance.

Freq. Marker	Freq. [MHz]	Raw reading[dBμv]	Det	Antenna Factor [dB/m]	Pre amp Gain [dB]	Corrected Reading [dBμv/m]	FCC 15.209 Limit [dBμv/m]	Delta [dB]	Azimuth [Deg]	Height [cm]	Polarization
LOW Channel – 923.3 MHz											
1	*1065.5	37.25	PK	24.4	-17.3	44.35	74	-29.66	23	114	Vertical
		24.82	Av			31.92	54	-22.08			
1	*2348.8	52.84	PK	28.1	-39.4	41.54	74	-32.46	22	106	Vertical
		41.69	Av			30.39	54	-23.61			
MID Channel – 925.1 MHz											
1	*1028.4	34.75	PK	24.2	-16.7	42.25	74	-31.75	302	167	Horizontal
		22.2	Av			29.7	54	-24.3			
1	*1585.7	58.37	PK	25.4	-39.1	44.67	74	-29.33	360	188	Vertical
		48.91	Av			35.21	54	-18.79			
2	*2383.3	51.89	PK	28.2	-39.4	40.69	74	-33.31	82	101	Vertical
		38.82	Av			27.62	54	-26.38			
High Channel – 927.5 MHz											
1	*133.38	46.83	QP	18	-23.1	41.73	43.52	-1.79	224	240	Vertical
1	*1586	60.85	PK	25.4	-39.1	47.15	74	-26.85	0	183	Vertical
		49.3	Av			35.6	54	-18.4			
2	*2380.2	52.6	PK	28.2	-39.4	41.4	74	-32.6	25	100	Vertical
		40.71	Av			29.51	54	-24.49			

QP: Quasi-Peak Detector, PK: Peak Detector, AV: Average Detector

*** Spurious Emission fall in Restricted Band**

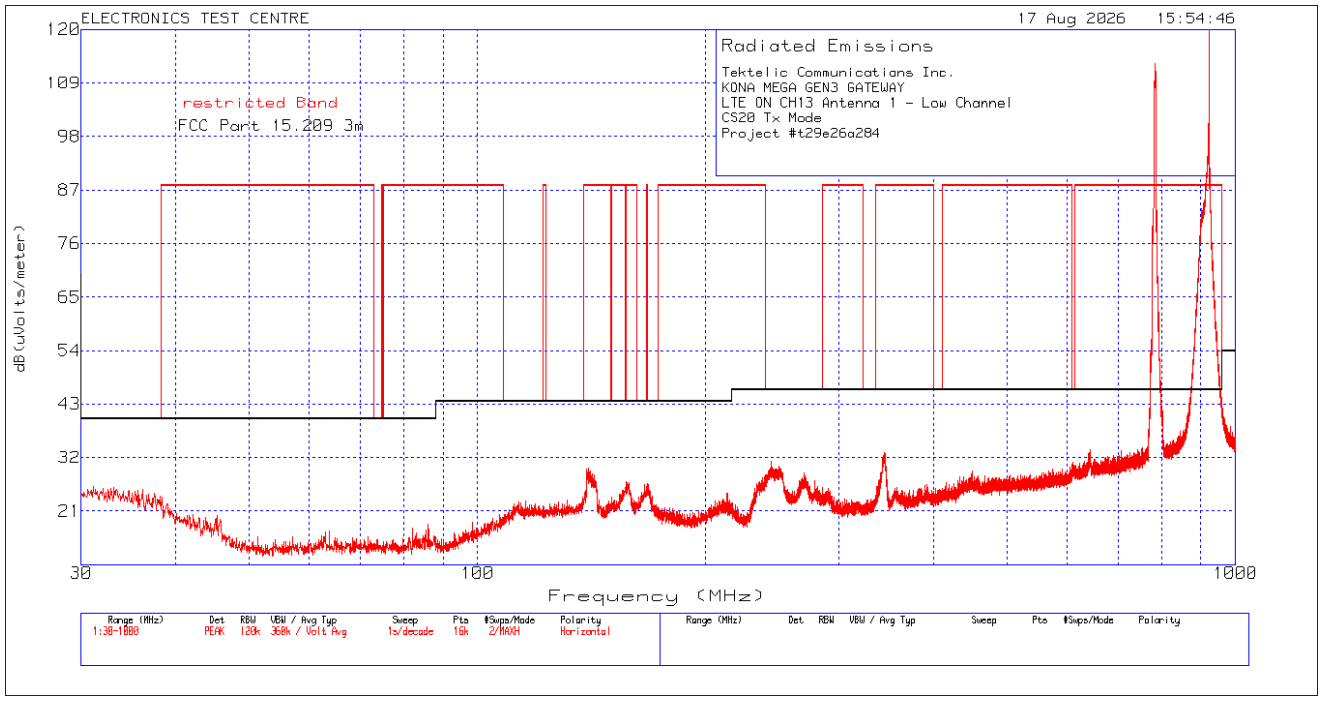
[1] Spurious emission not falling in restricted bands.

Antenna Port 1:

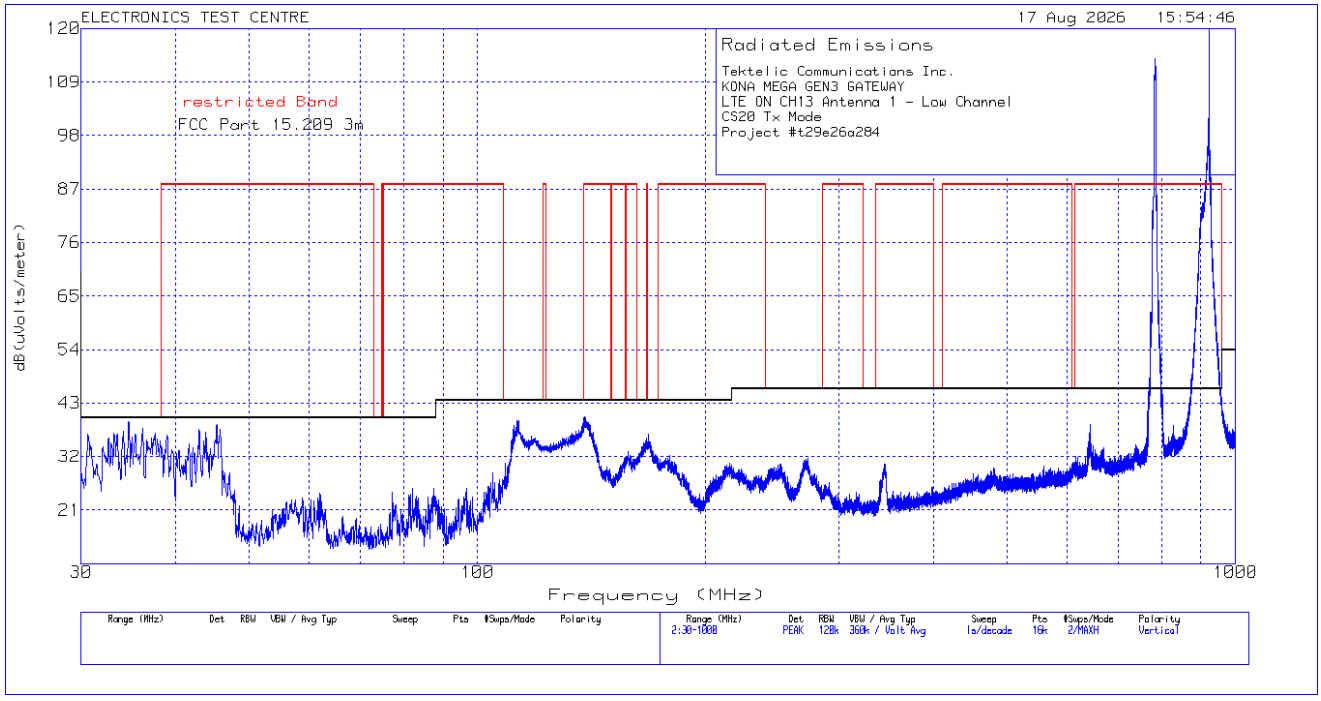
LOW Channel

Below 30 MHz Radiated Emission is more than 20 dB below the specified limit.

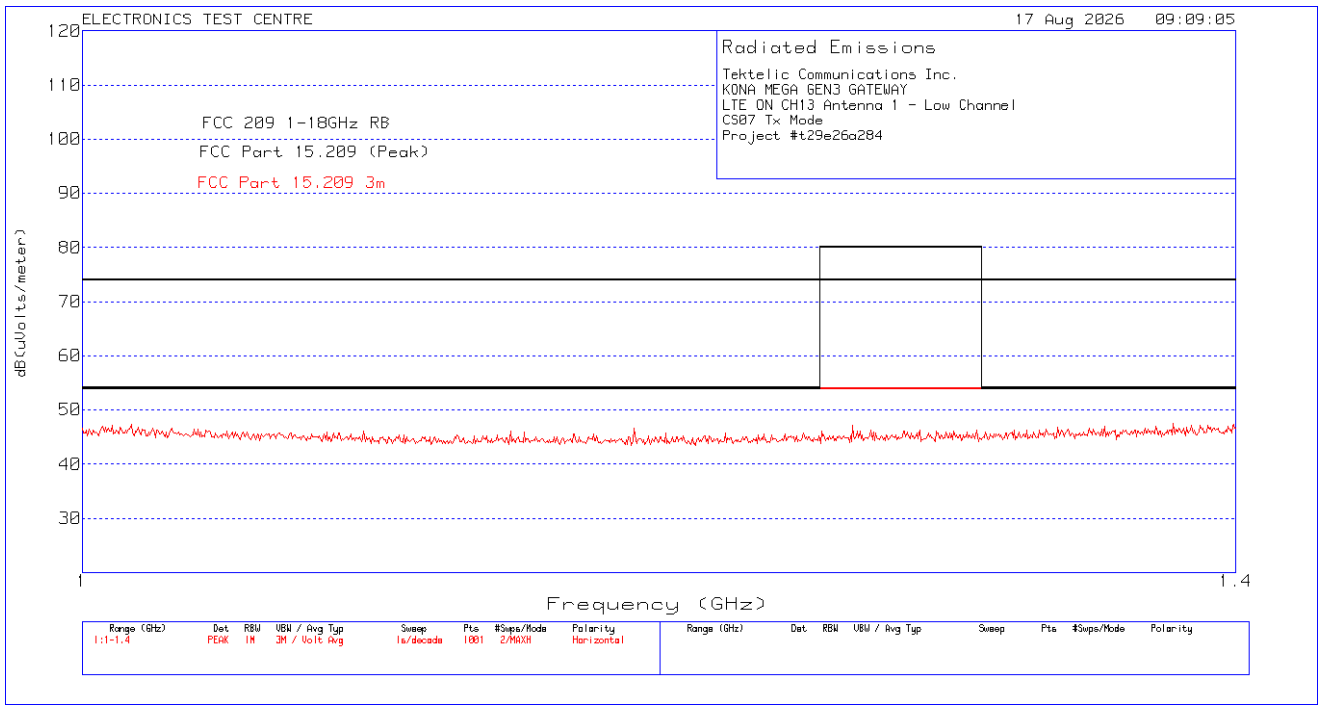
Plot of Radiated Emissions: Horizontal polarization



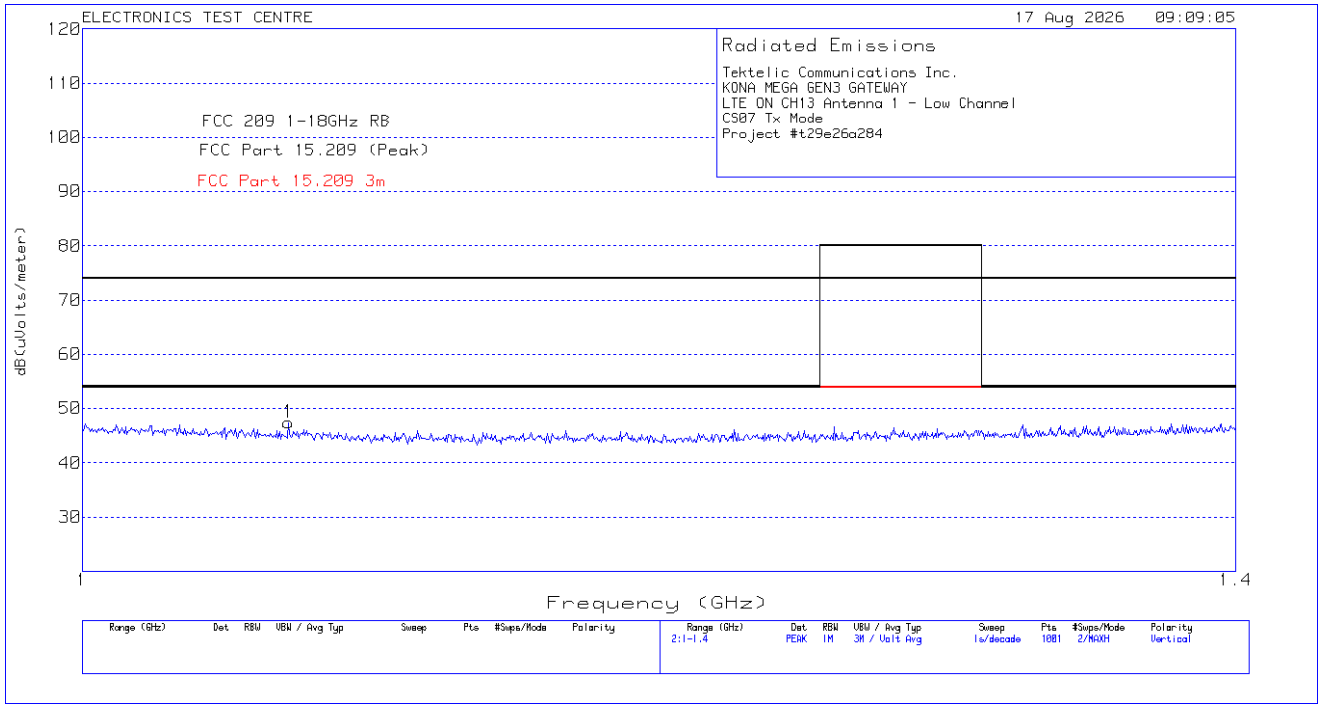
Plot of Radiated Emissions: Vertical polarization



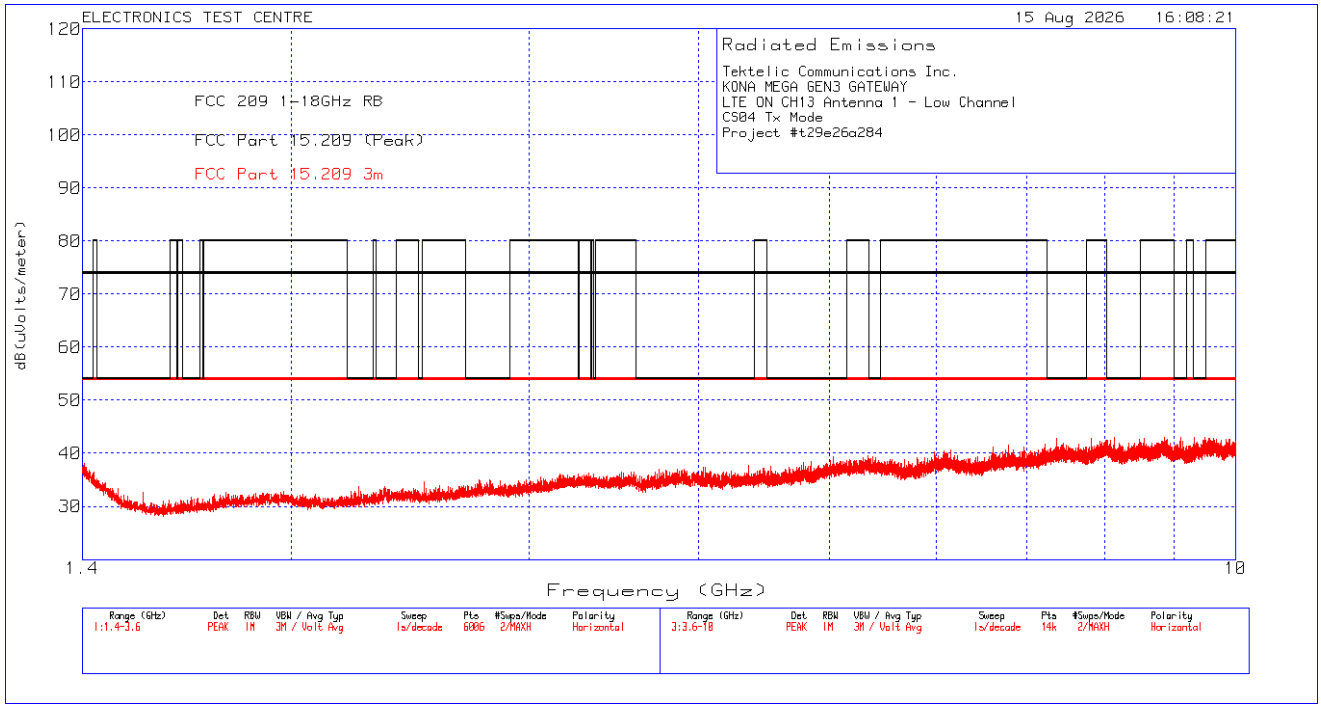
Plot of Radiated Emissions: Horizontal polarization



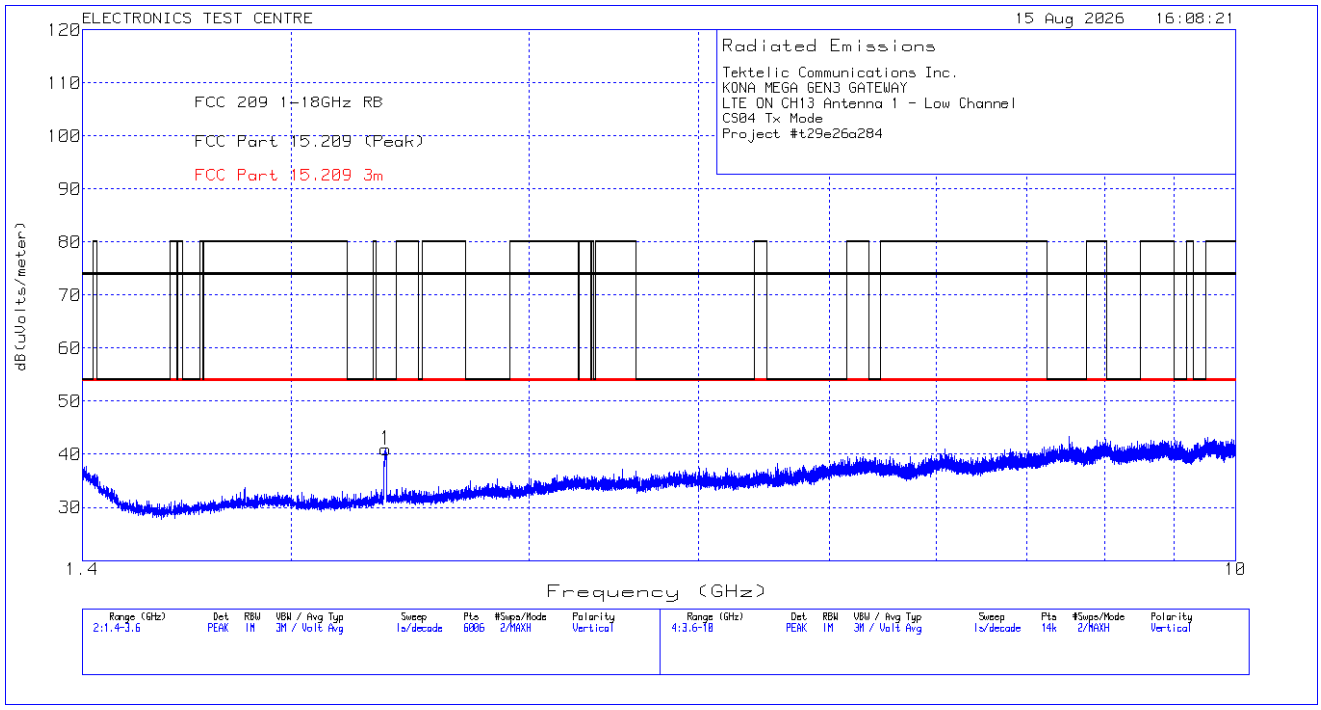
Plot of Radiated Emissions: Vertical polarization



Plot of Radiated Emissions: Horizontal polarization



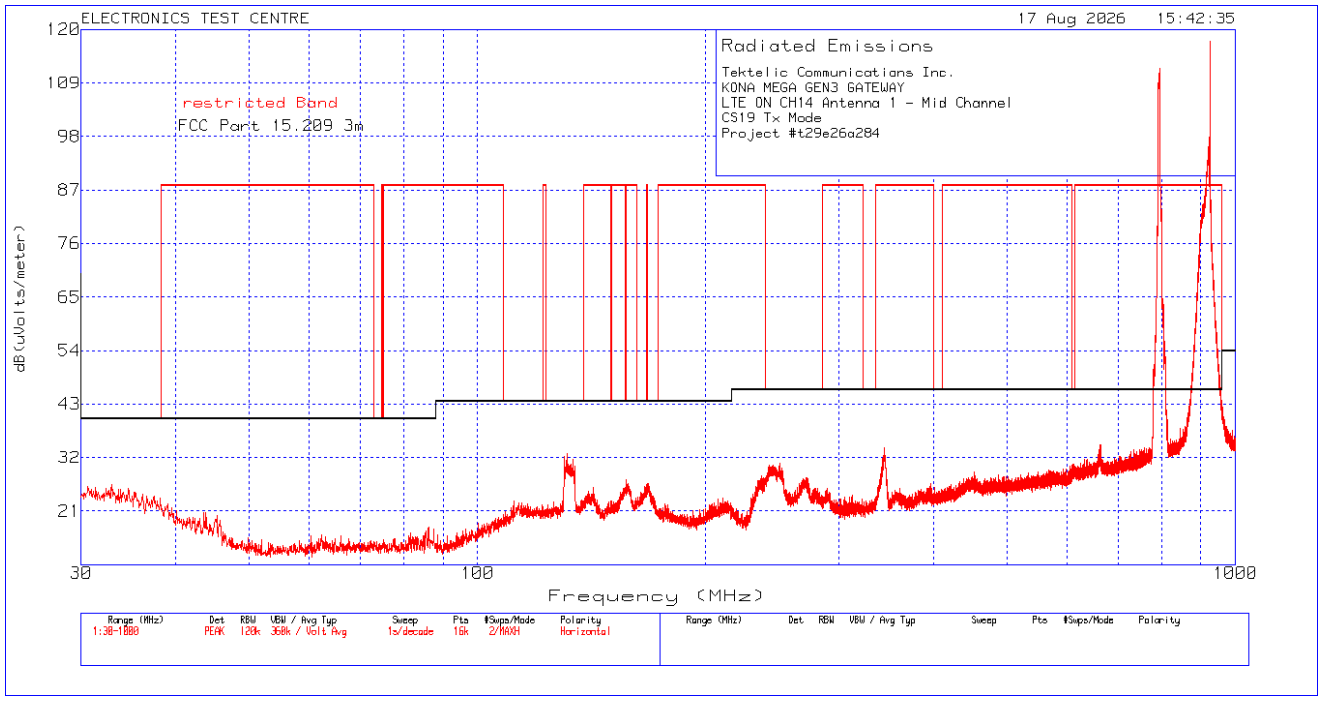
Plot of Radiated Emissions: Vertical polarization



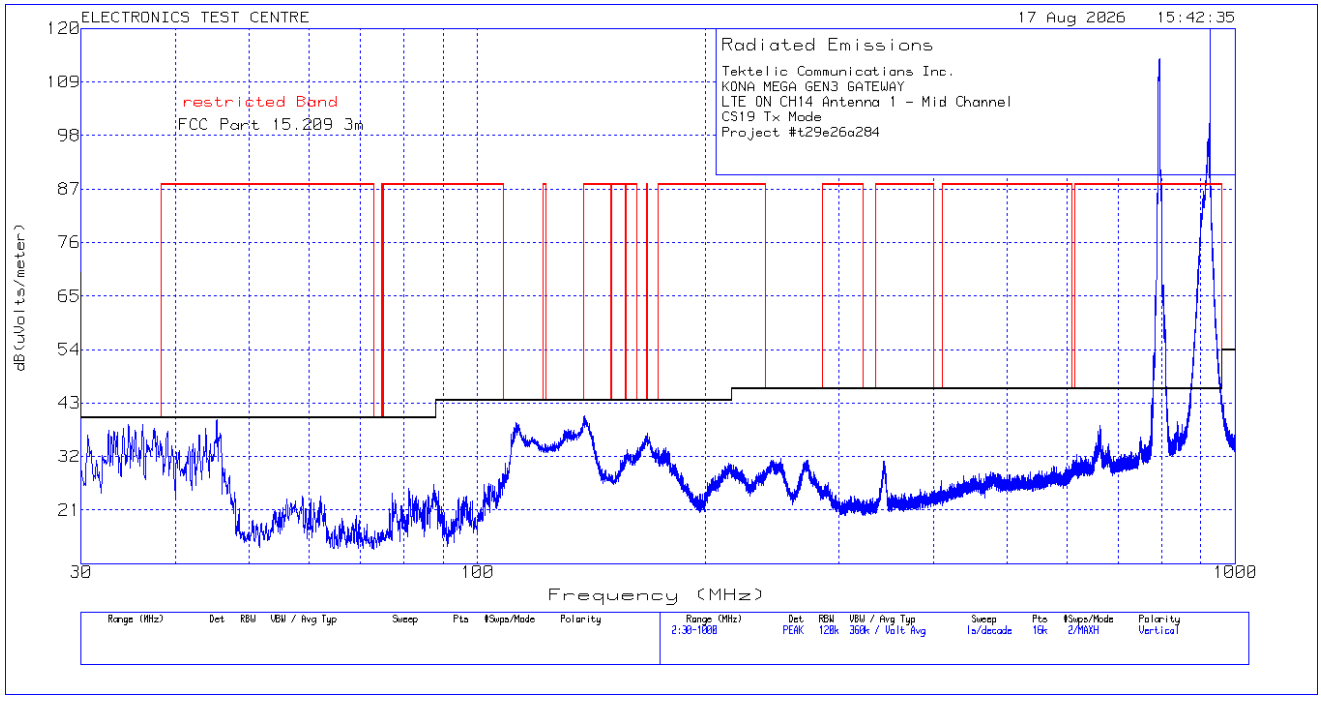
MID Channel

Below 30 MHz Radiated Emission is more than 20 dB below the specified limit.

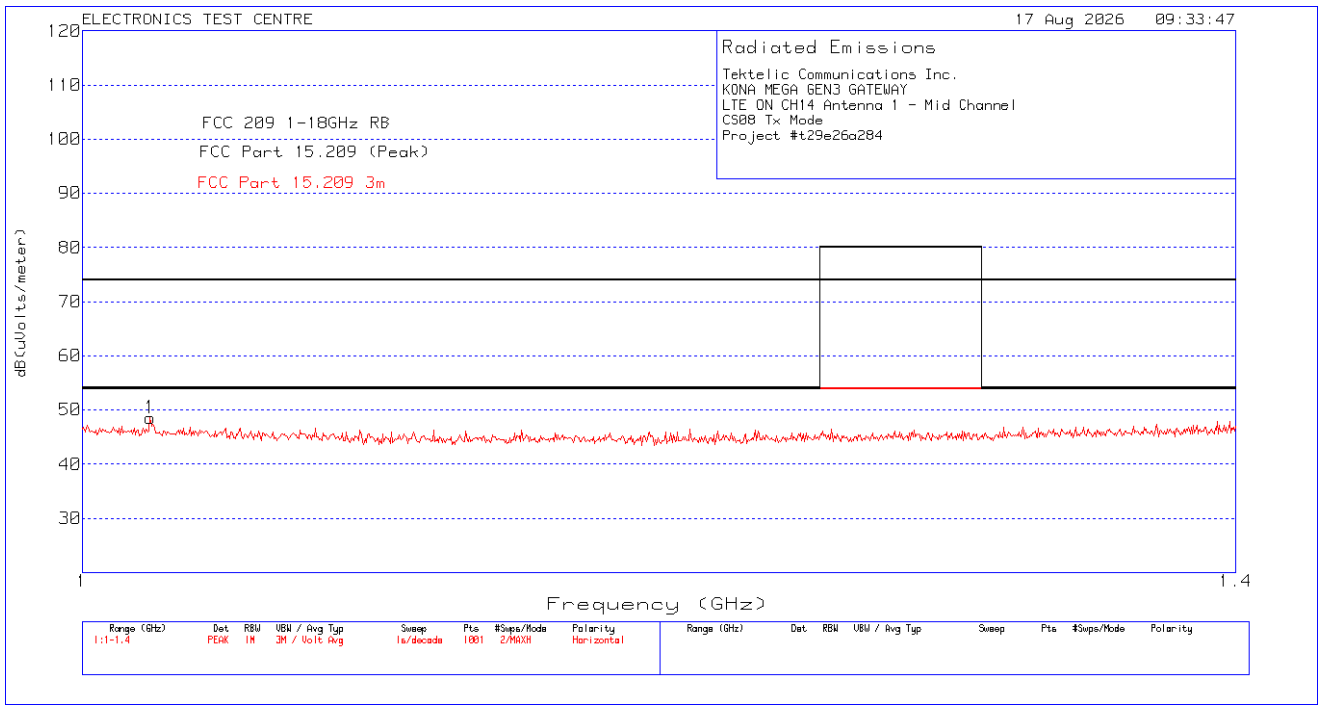
Plot of Radiated Emissions: Horizontal polarization



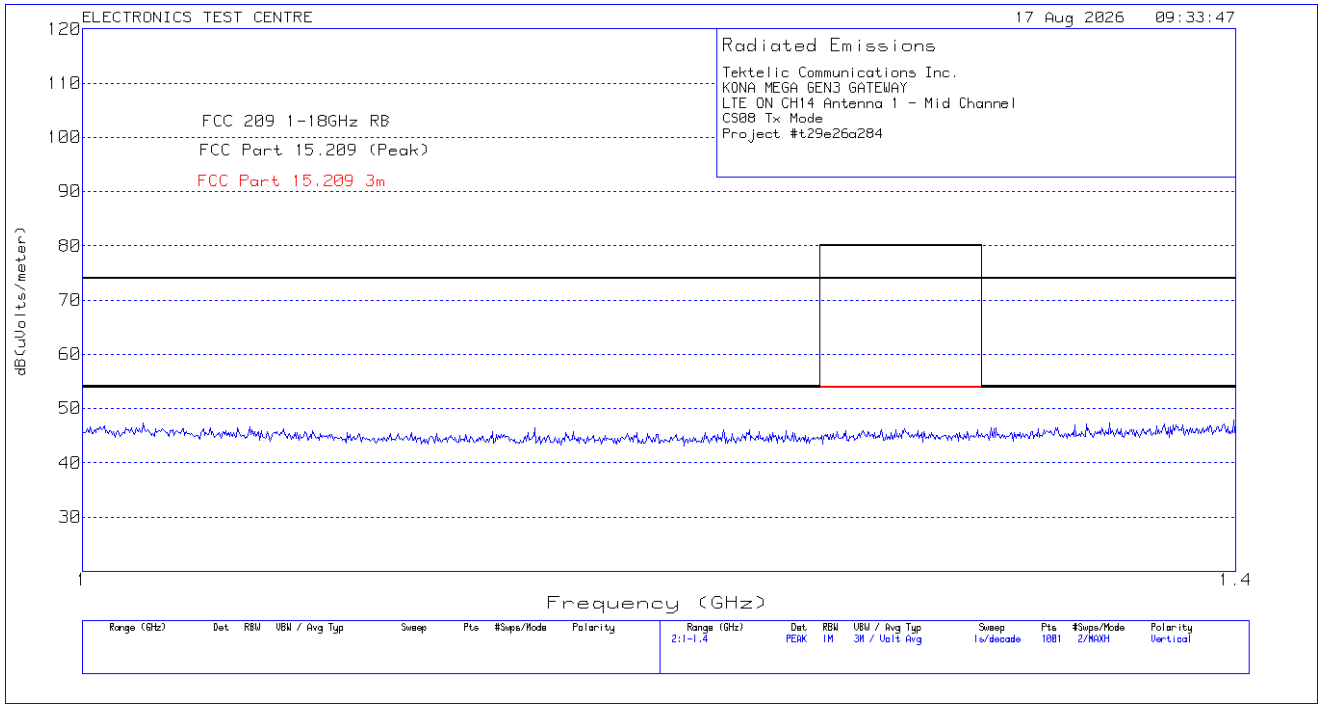
Plot of Radiated Emissions: Vertical polarization



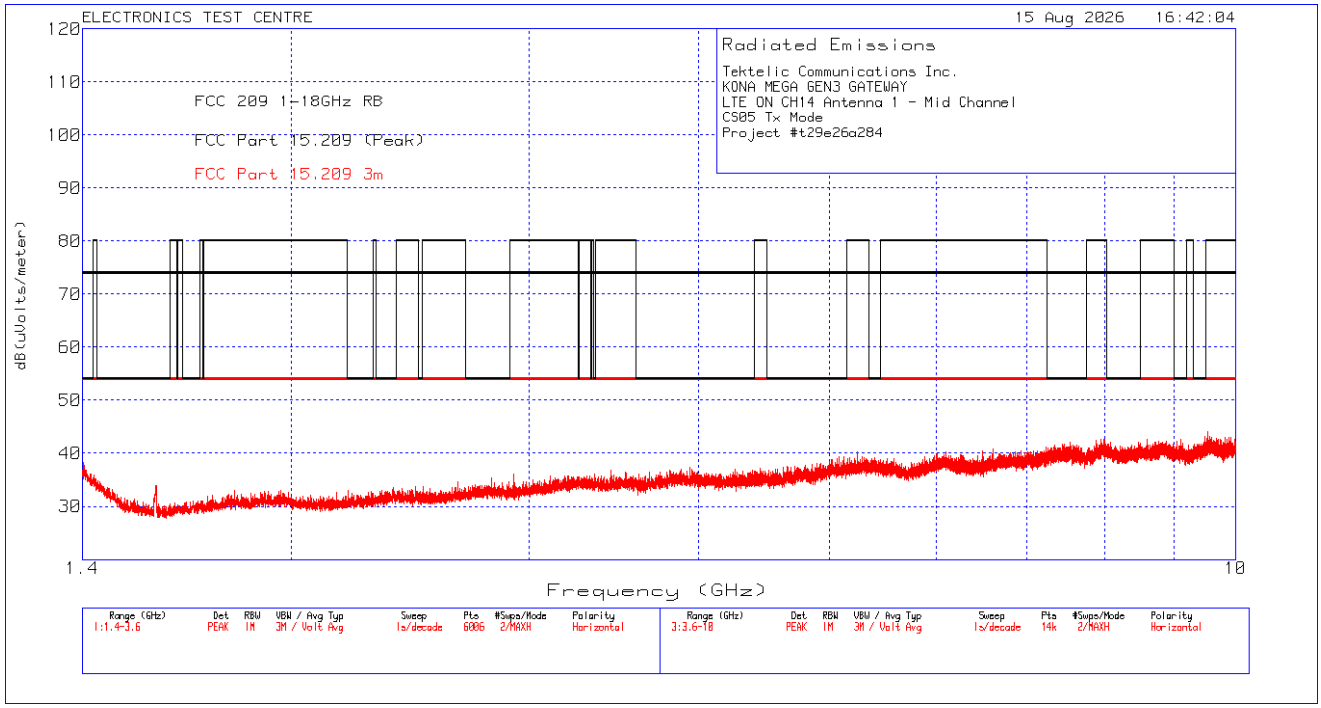
Plot of Radiated Emissions: Horizontal polarization



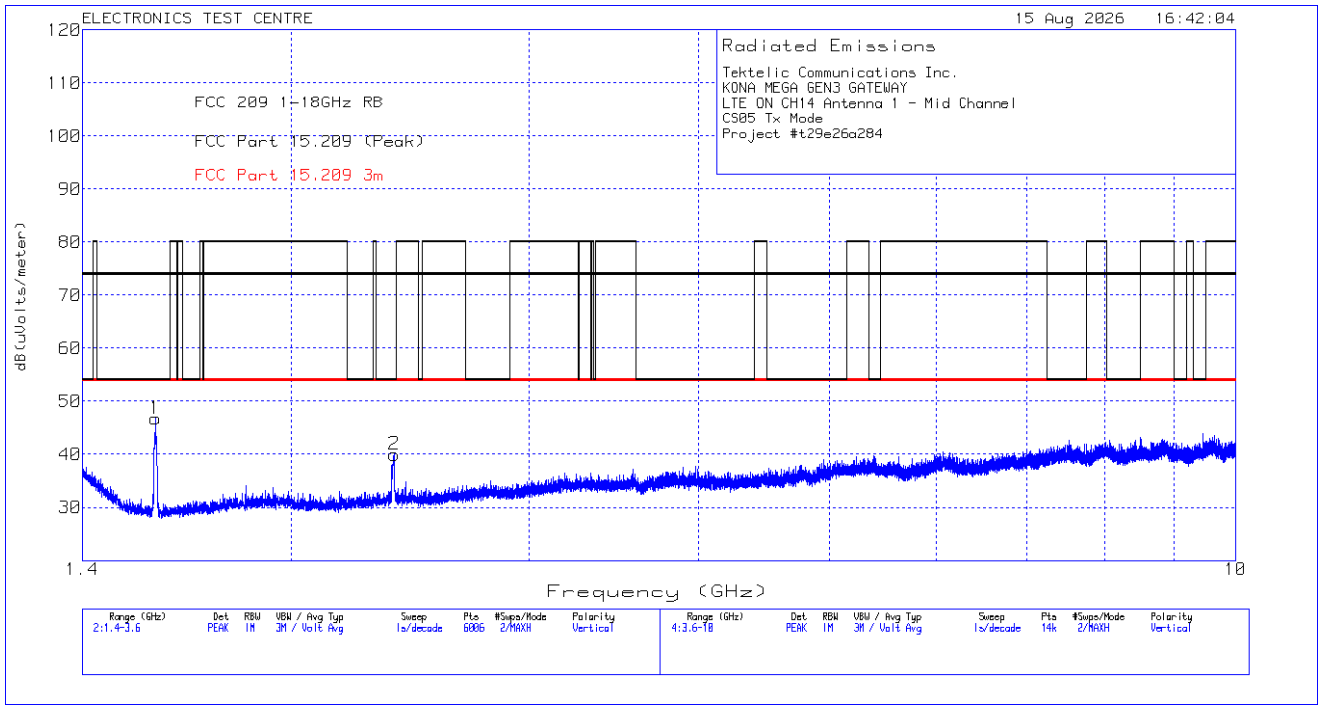
Plot of Radiated Emissions: Vertical polarization



Plot of Radiated Emissions: Horizontal polarization



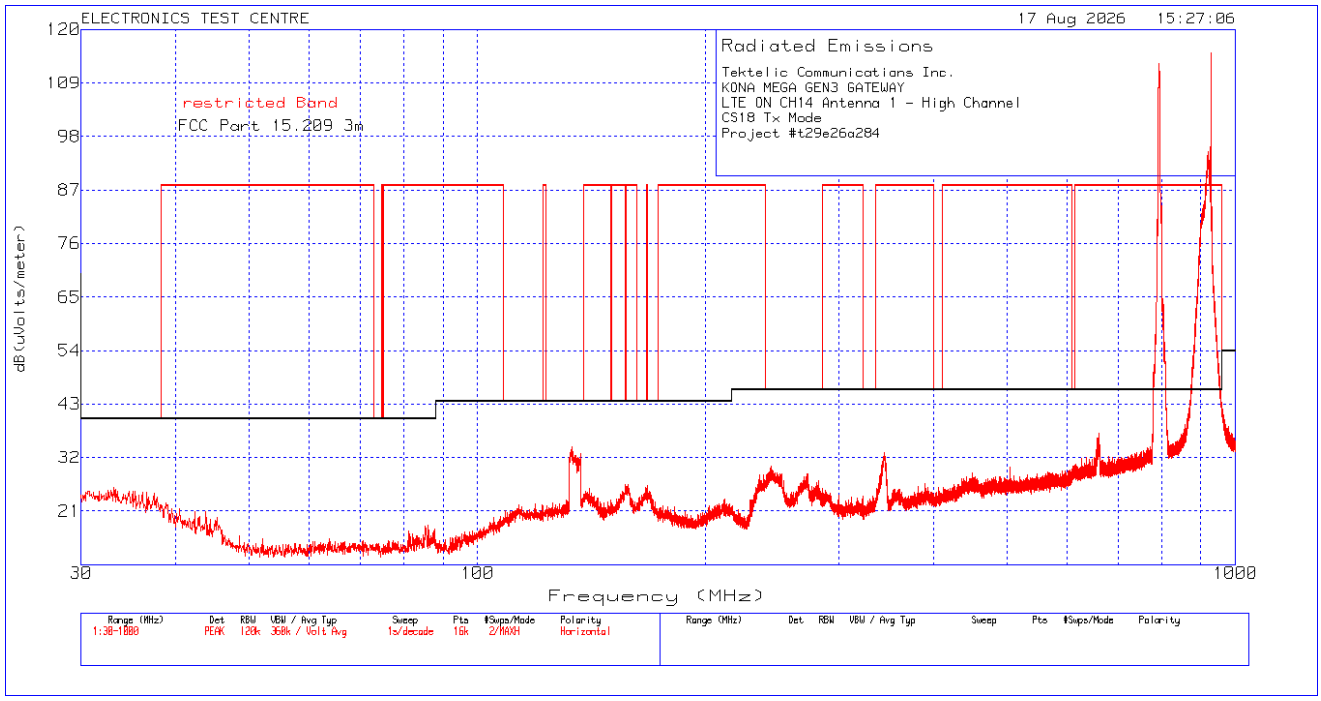
Plot of Radiated Emissions: Vertical polarization



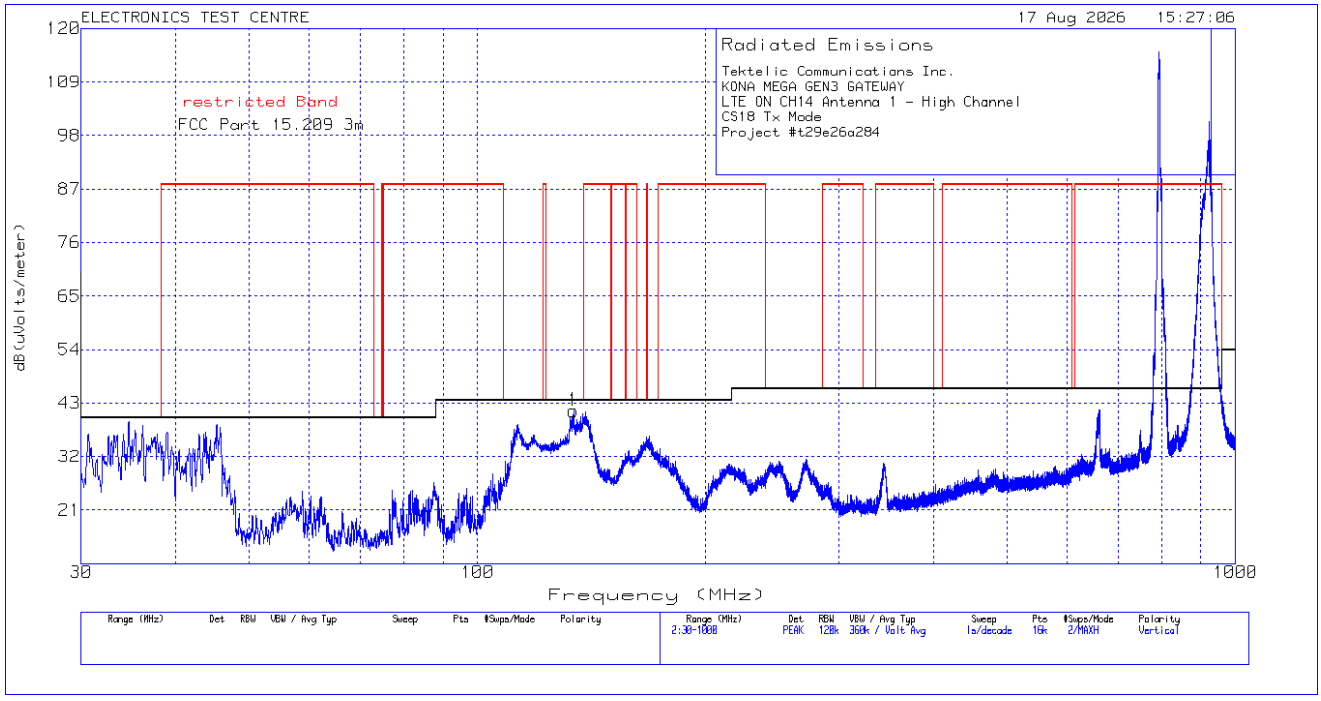
High Channel

Below 30 MHz Radiated Emission is more than 20 dB below the specified limit.

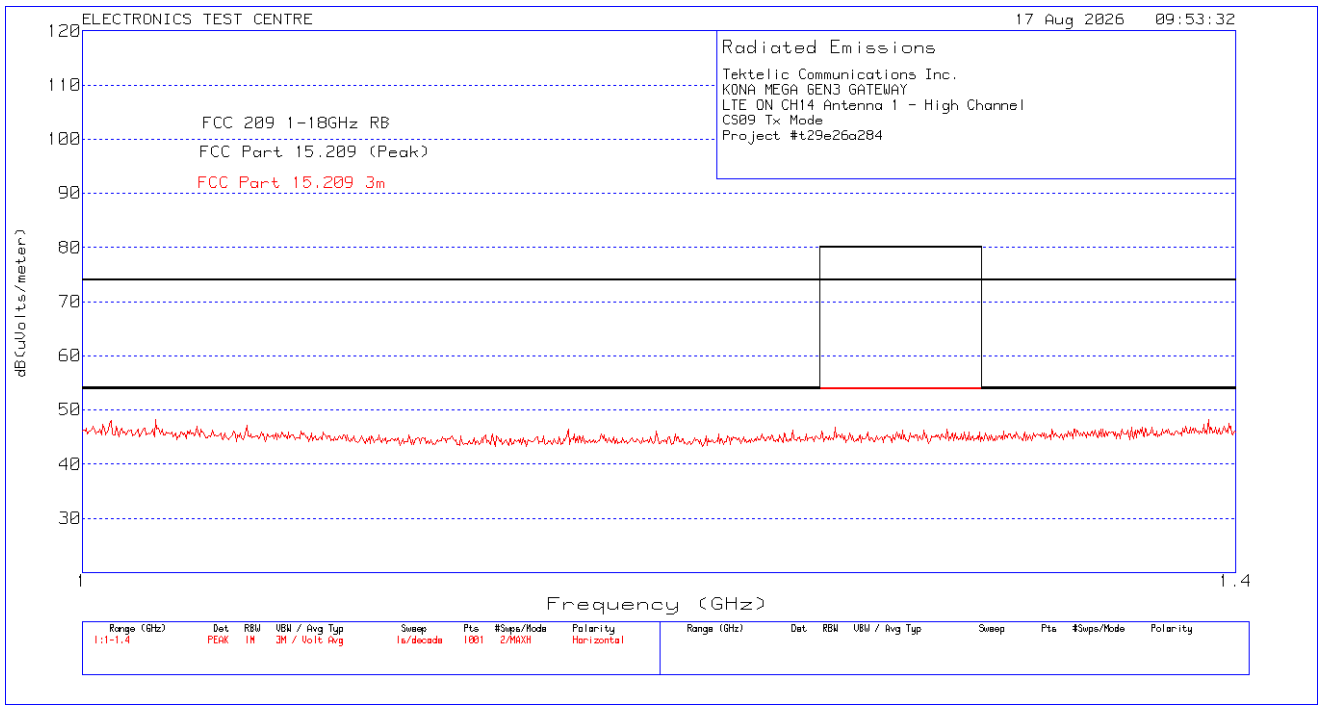
Plot of Radiated Emissions: Horizontal polarization



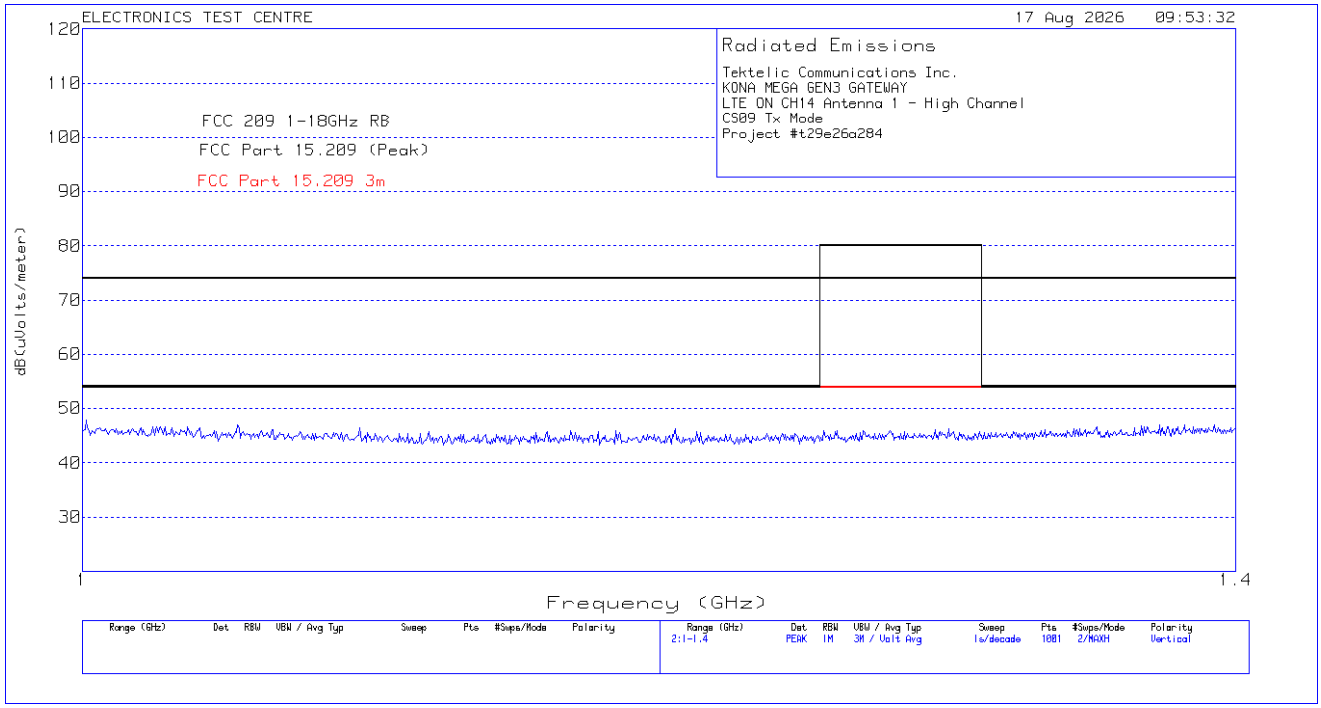
Plot of Radiated Emissions: Vertical polarization



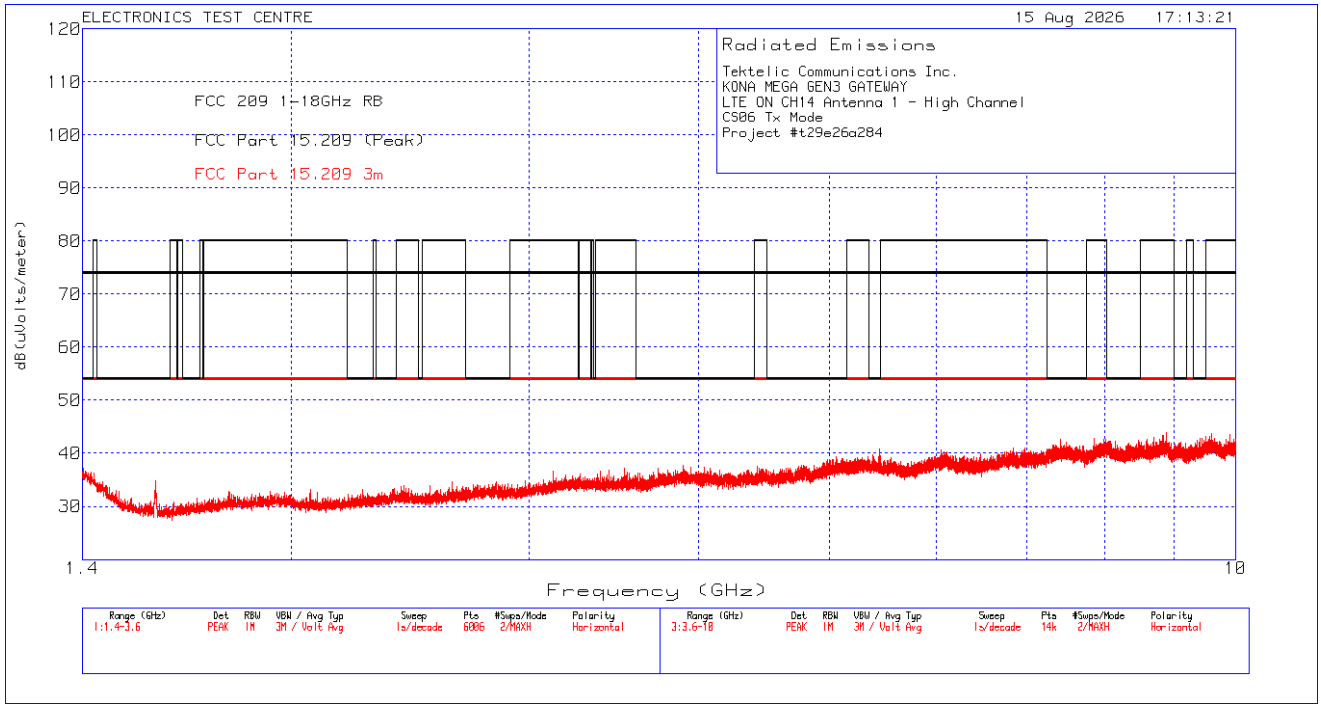
Plot of Radiated Emissions: Horizontal polarization



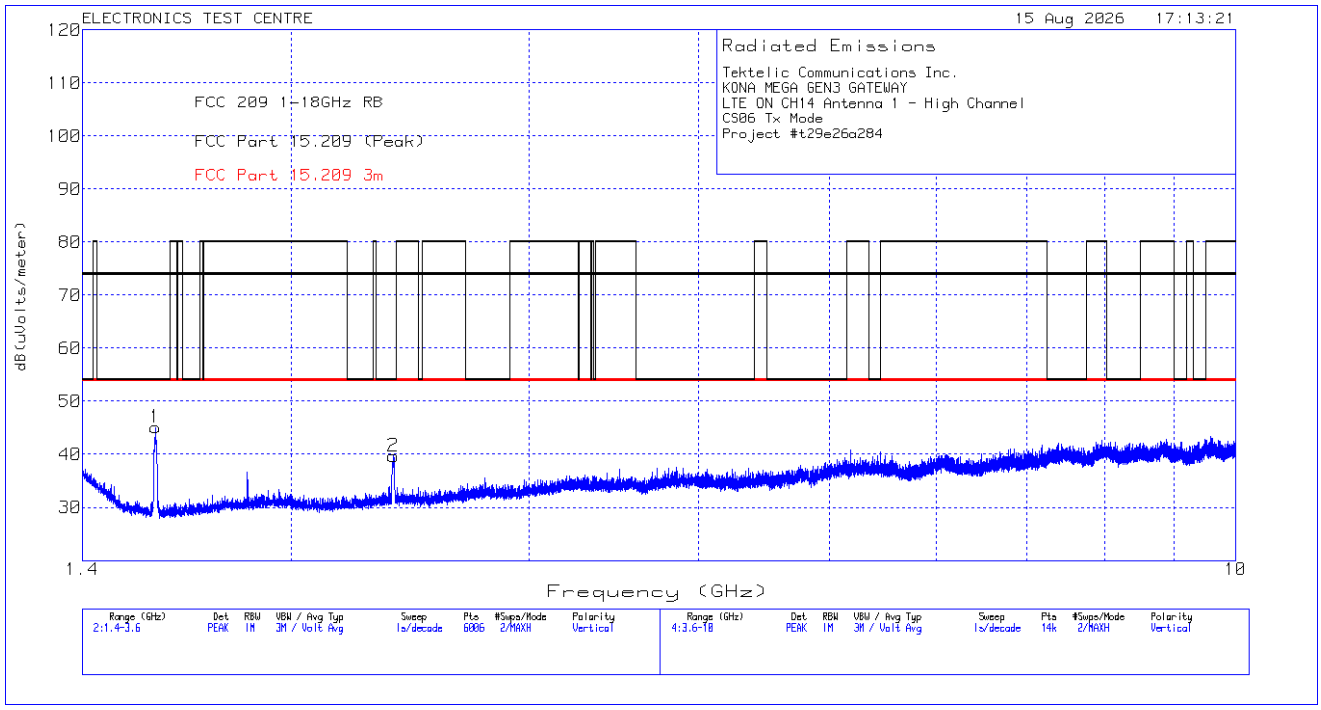
Plot of Radiated Emissions: Vertical polarization



Plot of Radiated Emissions: Horizontal polarization



Plot of Radiated Emissions: Vertical polarization



2.9 Radiated Emissions (RX Mode)

Test Lab: Electronics Test Centre, Airdrie	**EUT: Kona Mega Gen3 Gateway**
Test Personnel: Joseph Yumol	**Standard: FCC Part 15.109**
Date: 2026-08-17 (22.0°C, 46.3% RH)	**Basic Standard: ANSI C63.4**
	Class A

EUT status: Compliant

Frequency (MHz)	FCC Part 15.109 Class A Limit (3m)
30 – 88	49.54 (dBµV/m)
88 – 216	53.98 (dBµV/m)
216 – 960	56.90 (dBµV/m)
Above 960	60 (dBµV/m)

Criteria: The radiated emissions produced by a device, measured at a distance of 3 meters, shall not exceed the limits as specified.

2.9.1 Test Guidance:

From 30 MHz to 1000 MHz, measurements are performed with a broadband biconilog antenna and a resolution bandwidth of 120 kHz.

Above 1000 MHz, measurements are performed with a DRG Horn antenna, and a resolution bandwidth of 1 MHz. The area between the EUT and the antenna mast is covered with RF absorbent material. The diameter of the illumination area is the dimension of the line tangent to the EUT formed by 3 dB beamwidth of the measurement antenna at the measurement distance of 3 meter. The antenna is pointed for both azimuth and elevation to maintain the receive antenna within (Bore Sight) the cone of radiation from the EUT.

The scan is performed at discreet increments of turntable azimuth and stepped antenna height, with peak detector and Max Hold function which are selected in accordance with the applicable standard in order to assure capture of frequencies of interest. Optimization is performed based on the scan data.

After the pre-scan is completed, the frequencies of interest are optimized. The EUT is rotated in azimuth over 360 degrees and the direction of maximum emission is noted.

Antenna height is varied from 1 – 4 meters at this azimuth to obtain the maximum emission. Then the maximum level is measured with the appropriate detector and recorded. This may produce a different reading than the pre scan trace. Up to 1 GHz, measurements are performed with a Quasi-Peak detector. Above 1 GHz, measurements are recorded with Peak and/or Average detectors, as applicable.

2.9.2 Deviations From The Standard:

There were no deviations from the EUT setup or methodology specified in the standard.

2.9.3 Test Equipment

Testing was performed with the following equipment:

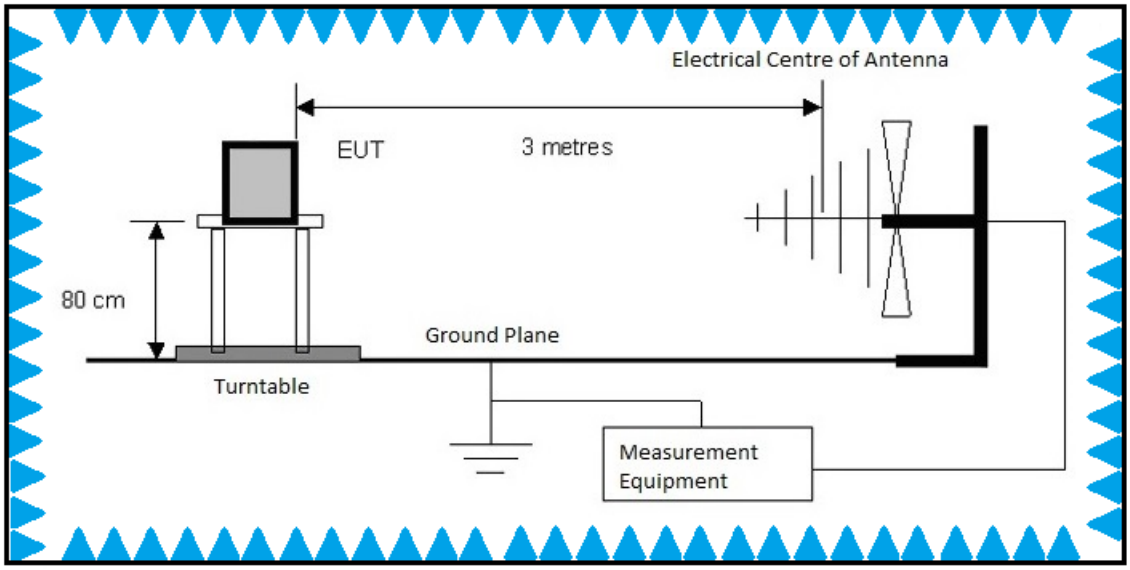
Equipment	Manufacturer	Model #	Asset #	Cal. Date (yyyy-mm-dd)	Cal. Due (yyyy-mm-dd)
EMC Software	UL	Ver. 9.5	SWC 021	N/A	
EMI receiver	Agilent	N9038A (FW A.22.08)	6906	2026-02-17	2027-02-17
Biconilog Antenna (30 – 1000 MHz)	AR	JB1	6905	2026-01-08	2027-01-08
DRG Horn (1 – 18 GHz)	EMCO	3115	19357	2025-11-18	2027-11-18
Temp/Humid Data Logger	LASCAR	EL-WIFI-TH	7033	2025-12-05	2026-12-05
Pre-Amplifier (30 – 1400 MHz)	HP	8447D	9291	2026-01-21	2027-01-21
L.N. Amplifier (1 – 18 GHz)	MITEQ	JS43-01001800-21-5P	4354	2026-01-21	2027-01-21
RE Cable below 1GHz	Insulated Wire Inc.	KPS-1501A-3600-KPA-01102006	4419	2026-01-21	2027-01-21
Re Cable Above 1 GHz	A.H. System Inc.	SAC-26G-8.23	6187	2026-01-21	2027-01-21

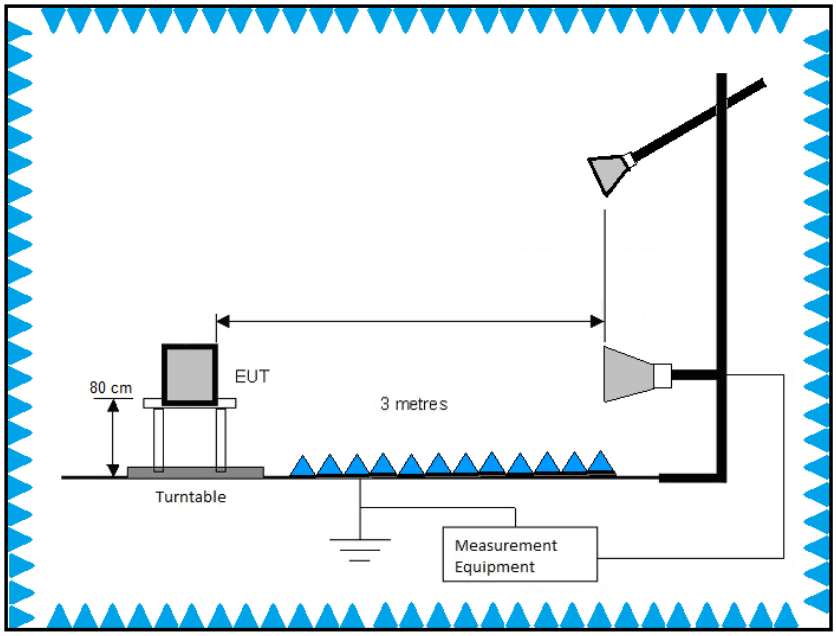
2.9.4 Test Sample Verification, Configuration & Modifications

To cover the unintentional radiated emission. The EUT was configured in receive mode. Unit was placed at the center of turntable in semi-anechoic chamber 80cm above the ground plane and at a distance of 3m from the test receive antenna.

The EUT met the requirements without modification.

EUT RX configuration Block Diagram for Radiated Emissions testing:




80 cm
EUT
3 metres
Turntable
Measurement
Equipment

2.9.5 Radiated Emissions Data:

The emissions data are presented in tabular form, showing turntable azimuth, antenna height and polarization, the uncorrected spectrum analyzer reading, the correction factors applied, the net result, the value of the limit at the frequency investigated, and the Delta between the result and the limit.

Meter Reading in dBµV + Antenna Factor in dB/m + Gain/Loss Factor in dB = Corrected Field Strength in dbµV/m.

Delta = Field Strength – Limit

Notes:

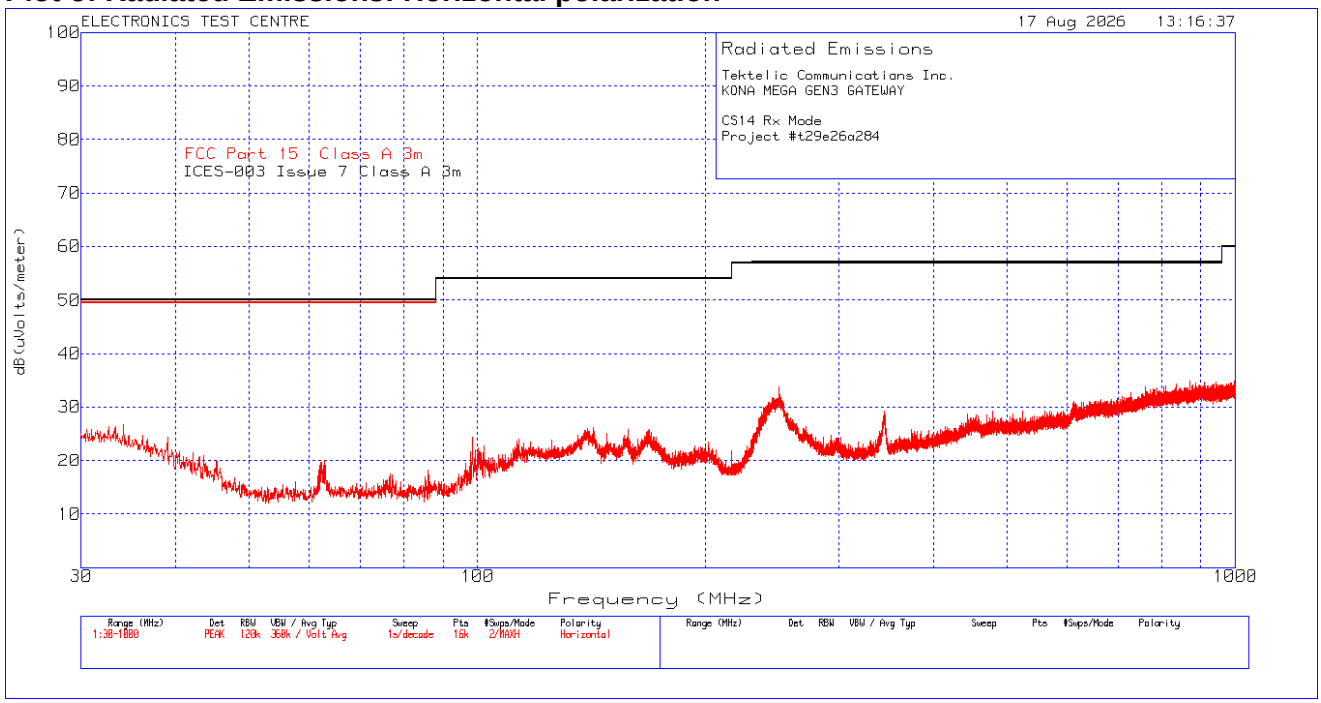
- When a preamp is used, the resulting gain is compensated, producing a negative value for the Cable Loss.
- Measurements reported are the result of adjusting the turntable azimuth and antenna height to obtain the maximum EUT emission. This may produce a different reading than the plot trace. The plot is a Peak Hold function obtained at discreet increments of height and azimuth, while the reported measurement is obtained with the appropriate Quasi Peak or Average detector after the height and azimuth have been adjusted for maximum emission.
- In receive mode, the EUT was assessed up to 5.0 GHz.

Negative values for Delta indicate compliance.

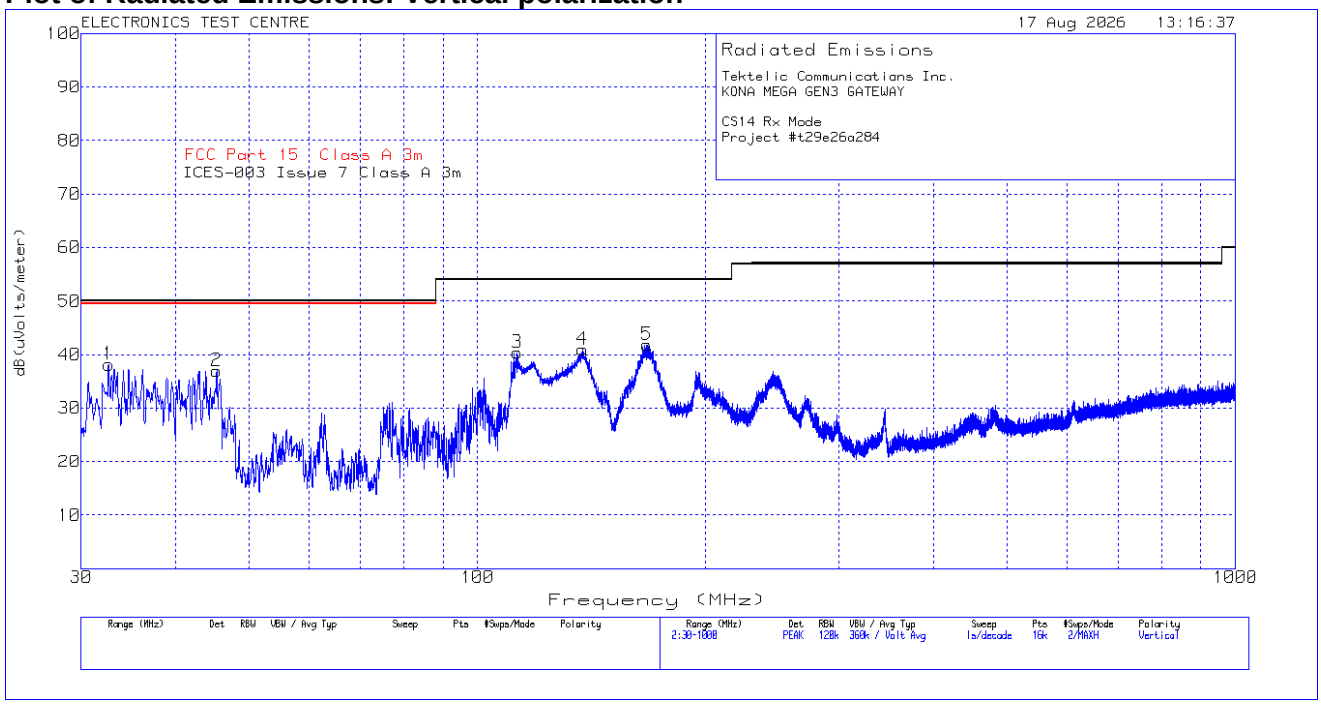
Freq. Marker	Freq. [MHz]	Raw reading[dBµv]	Det	Antenna Factor [dB/m]	Pre amp Gain [dB]	Corrected Reading [dBµv/m]	FCC 15.109 Class A Limit [dBµv/m]	Delta [dB]	Azimuth [Deg]	Height [cm]	Polarization
RX Mode											
1	33.185	36.00	QP	22.50	-24.90	33.60	49.54	-15.94	50	130	Vertical
2	45.255	46.91	QP	14.10	-24.70	36.31	49.54	-13.23	170	103	Vertical
3	112.25	42.85	QP	17.20	-23.60	36.45	53.98	-17.53	336	101	Vertical
4	137.825	45.13	QP	17.70	-23.30	39.53	53.98	-14.45	104	100	Vertical
5	167.636	43.40	QP	15.90	-22.90	36.40	53.98	-17.58	114	100	Vertical

QP: Quasi-Peak Detector

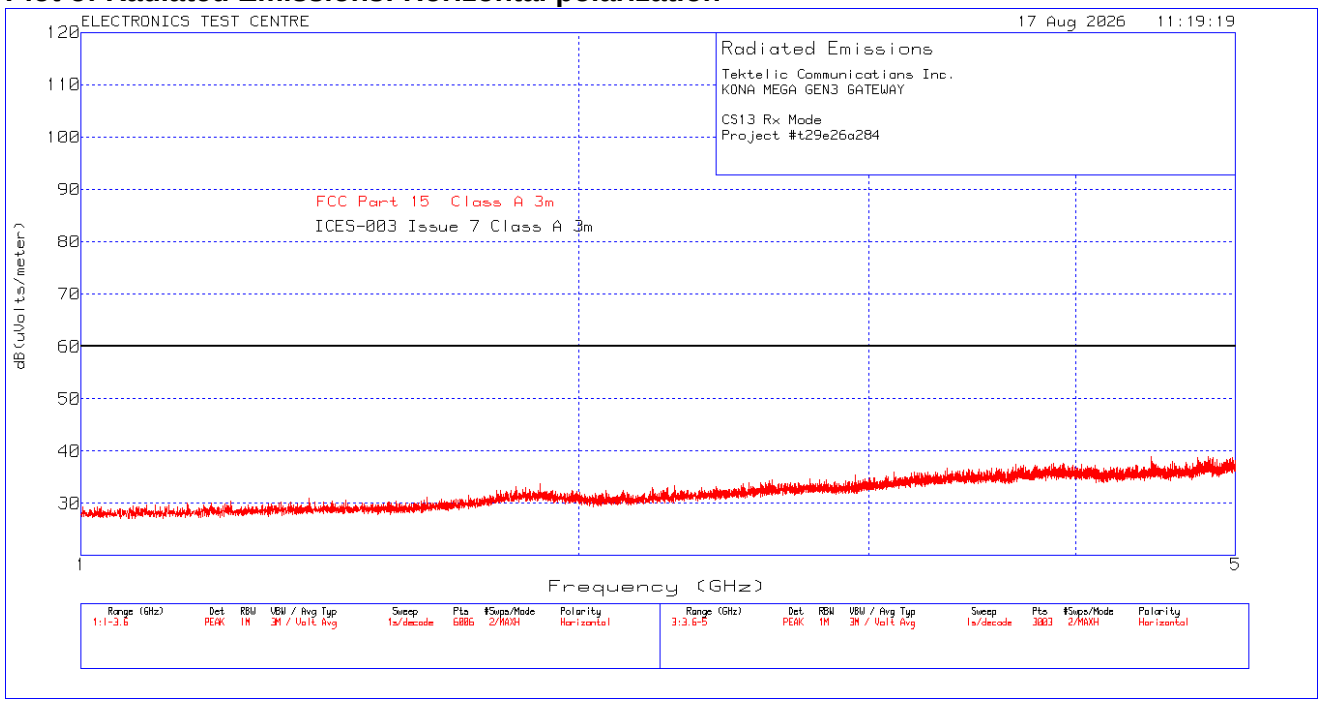
Plot of Radiated Emissions: Horizontal polarization



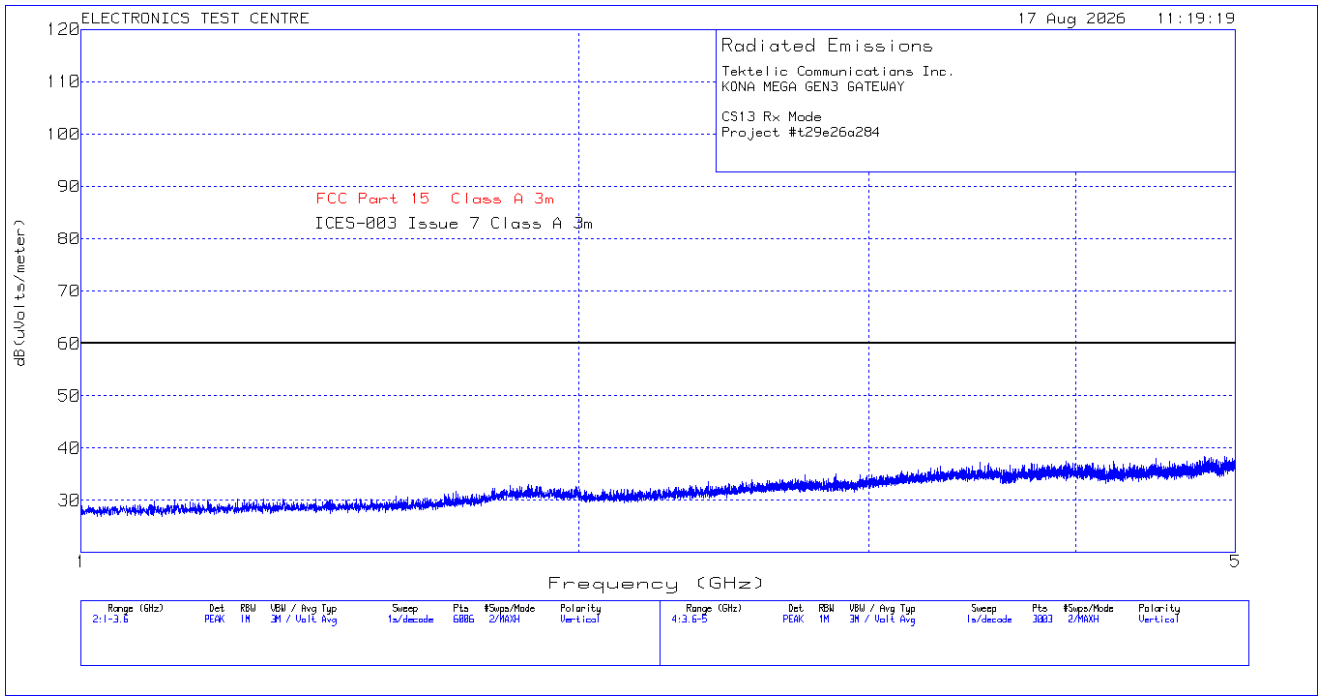
Plot of Radiated Emissions: Vertical polarization



Plot of Radiated Emissions: Horizontal polarization



Plot of Radiated Emissions: Vertical polarization



2.10 RF Exposure

Test Lab: Electronics Test Centre, Airdrie	**EUT: Kona Mega Gen3 Gateway**
Test Personnel:	**Standard: FCC PART 15.247/ 1.1307**
Date:	

EUT status: Exempt from SAR Evaluation

Compliant: RF exposure assessment to be provided in a separate Exhibit.

3.0 TEST FACILITY

3.1 Location

The Kona Mega Gen3 Gateway was tested at the Electronics Test Centre laboratory located in Airdrie, Alberta, Canada. The Radio Frequency Anechoic Chamber (RFAC), identified as Chamber 1, has a usable working space measuring 10.6 m long x 7.3 m wide x 6.5 m high.

This test site rigiesrted with Industry Canada as per registration # 2046A and its CAB Identifier number is CA2046. It also listed with the FCC under Registration Number 175004 and the MRA designation number is CA2046.

The floor, walls and ceiling consist of annealed steel panels. The walls and ceiling are covered with ferrite tile, augmented by RF absorbant foam material on the end wall nearest the turntable, and on the adjacent walls and the ceiling. The chamber floor supports a 15 cm high internal floor, constructed of annealed steel panels, that forms the ground plane, and is bonded to the chamber walls.

The 3-m diameter turntable is flush-mounted with the floor. A sub-floor cable-way is provided to route cables between the turntable pit and EUT support equipment located in the Control Room. Cables reach the EUT through an opening in the centre of the turntable.

Test instrumentation and EUT support equipment is located in the Control Room, consisting of two shielded vestibules joined together at the side of the main room. Cables are routed through bulkhead panels between the rooms and the test chamber as required. Power feeds are routed into the main room and vestibules through line filters providing at least 100 dB of attenuation between 10 kHz and 10 GHz.

Either floor mounted or table-top equipment can be tested at this facility.

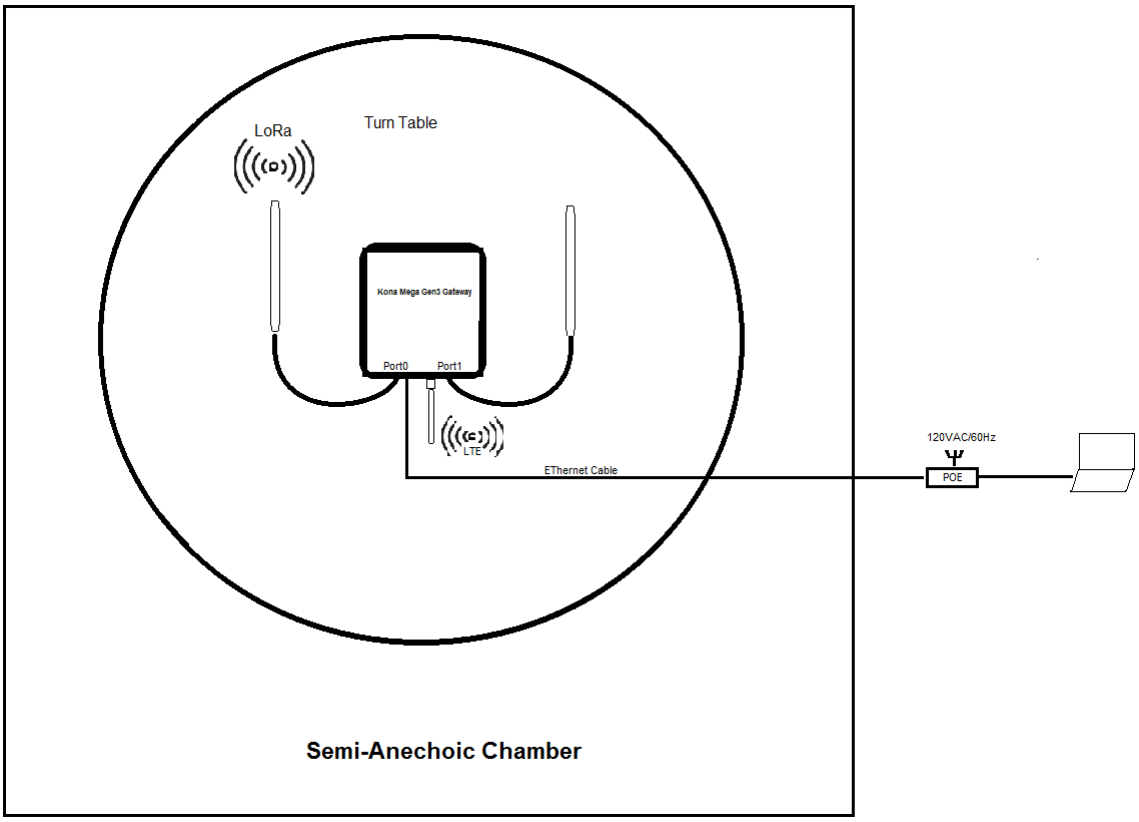
3.2 Grounding Plan

The Kona Mega Gen3 Gateway was placed at the center of the test chamber turn table at 80-cm from ground plane below 1GHz and at 1.5m high above 1 GHz for transmits mode and 80cm high for RX mode. The Kona Mega Gen3 Gateway enclosure connected to ground plane via an earth ground connection.

3.3 Power Supply

For testing EUT power supplied via a PoE adapter.

Appendix A – Test Setup Block Diagram



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