

Test Report C-3939H

Equipment Under Test:	116.495.00.1
Requirement(s):	FCC 15.247 15.207 RSS-247
Test Date(s):	12/2/2025 – 2/10/2026
Prepared for:	Geberit International AG Attn: Ziga Kovacic Schachenstrasse 77. 8645 Jona / Switzerland

Report Issued by: Mitchell Freund, EMC Test Engineer	
Signature: 	Date: 4/29/2026
Report Reviewed by: Adam Alger, Sr. Manager, EMC Laboratory	
Signature: 	Date: 4/29/2026
Report Constructed by: Mitchell Freund, Test Engineer	
Signature: 	Date: 4/29/2026

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Company: Geberit International AG	Page 1 of 32	Name: 116.495.00.1
Report: TR3939H		Model: GW-21-A
Quote: NBO-01-2024-006892-4		Serial: Engineering Sample

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Ezurio Test Services in Review

The Ezurio laboratory located at W66 N220 Commerce Court Cedarburg, Wisconsin, 53012 USA is recognized through the following organizations:



A2LA – American Association for Laboratory Accreditation

Accreditation based on ISO/IEC 17025:2017 with Electrical (EMC) Scope

A2LA Certificate Number: 1255.01

Scope of accreditation includes all test methods listed herein unless otherwise noted



Federal Communications Commission (FCC) – USA

Accredited Test Firm Registration Number: 953492

Recognition of two 3 meter Semi-Anechoic Chambers



Innovation, Science and Economic Development Canada

Accredited U.S. Identification Number: US0218

Recognition of two 3 meter Semi-Anechoic Chambers

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1 TEST REPORT SUMMARY

During **12/4/2025 – 2/10/2026** the Equipment Under Test (EUT), **116.495.00.1**, as provided by **Geberit International AG** was tested to the following requirements:

FCC 15.247 | RSS-247

Requirements	Description	Method	Compliant
15.247(d) 15.209 RSS-247 Clause 6.6 RSS-GEN Clause 8.10	Spurious Radiated Emissions in Restricted Bands 30-40000 MHz	ANSI C64.10	Yes
15.247(a)(2) RSS-247 Clause 6.3.1(a)	Occupied Bandwidth and 6dB DTS BW	ANSI C64.10	Yes
15.247(b)(3) RSS-247 Clause 6.3.2	RF Output Power	ANSI C64.10	Yes
15.247(d) RSS-247 Clause 6.6 RSS-GEN A1 Clause 8.9	Out-of-Band Emissions	ANSI C64.10	Yes
15.247(e) RSS-247 Clause 6.3.1(b)	Power Spectral Density	ANSI C64.10	Yes
2.1055(d) RSS-GEN 6.11	Frequency Stability	ANSI C64.10	Reported
15.207 RSS-GEN 8.8	AC Conducted Emissions	ANSI C63.10	Yes

Notice:

The results relate only to the item tested as configured and described in this report. Any additional configurations, modes of operation, or modifications made to the equipment under test after the specified test date(s) are at the decision of the client and may not apply to the data seen in this test report.

The decision rule for Pass / Fail assessment to the specification or standard listed in this test report has been agreed upon by the client and laboratory to be as follows:

Measurement Type	Rule
Emissions – Amplitude	1 dB below specified limit
Emissions – Frequency	1% less than the specification
Immunity	Tested at specified level

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2 CLIENT INFORMATION

Company Name	Geberit International AG
Contact Person	Ziga Kovacic
Address	Schachenstrasse 77. 8645 Jona / Switzerland

2.1 Equipment Under Test (EUT) Information

The following information has been supplied by the client

Product Name	116.495.00.1
Model Number	GW-21-A
Serial Number	Engineering Sample
Date of Receipt	11/25/2025
Condition	Good
FCC ID	2A75ZGW21A
IC ID	35230-GW21A

2.2 Product Description

The Geberit Gateway is a network device containing BLE & Wi-Fi radios to power and communicated with plumbing devices and building management systems.

2.3 Modifications Incorporated for Compliance

None noted at time of test

2.4 Deviations and Exclusions from Test Specifications

None noted at time of test

2.5 Additional Information

Input power 120 V@ 60 Hz

2.6 EUT Programming

Equipment used for EUT programming (not part of the EUT)

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HP EliteBook 840

Linksys E6900 V1.1 - Router

Teraterm Version 5.1 (Git 9ffa9f6b0)

2.7 Antenna information

Linx Technologies

ANT-DB1-LCD-SMA

Dimensions : 83.1 mm x 10.0 mm x 10.0 mm

Range	2.4 GHz WiFi	U-NII 1-2	5.8 GHz WiFi/ U-NII-3 Band
Range (GHz)	2.4 - 2.5	5.125 – 5.725	5.725 – 5.875
Peak Gain	2.8 dBi	4.5 dBi	2.92 dBi

2.8 Test Channels

Channel	Frequency (MHz)	Data Rates
1	2412.0	802.11b – 1 & 11 Mbps 802.11g – 6 & 54 Mbps 802.11n – MCS0 & MCS7
6	2437.0	
11	2462.0	

2.9 Power Table and Reduced Video Bandwidth

Data Rate	Minimum Average VBW (Hz)	Power Setting
802.11b - 1 Mbps	533	17 dBm
802.11b - 11 Mbps		17 dBm
802.11g - 6 Mbps		12 dBm
802.11g - 54 Mbps		12 dBm
802.11n - MSC0		12 dBm
802.11n - MSC7		12 dBm

3 REFERENCES

Publication	Edition	Date	AMD 1	AMD 2
FCC eCFR 47 Part 15		2026		
ANSI C63.10		2020	2024	
RSS-247	4	2025		
RSS-GEN	5	2018	2019	2021
KDB 558074 D01		2019		

4 UNCERTAINTY SUMMARY

Using the guidance of the following publications the calculated measurement uncertainty represents an expanded uncertainty expressed at approximately the 95 % confidence level, using a coverage factor of $k = 2$.

References
CISPR 16-4-1
CISPR 16-4-2
CISPR 32
ANSI C63.23
A2LA P103
A2LA P103c
ETSI TR 100-028

Measurement Type	Configuration	Uncertainty $\pm$
Radiated Emissions	Biconical Antenna	5.0 dB
Radiated Emissions	Log Periodic Antenna	5.3 dB
Radiated Emissions	Horn Antenna	4.7 dB
AC Line Conducted Emissions	Artificial Mains Network	3.4 dB
Telecom Conducted Emissions	Asymmetric Artificial Network	4.9 dB
Disturbance Power Emissions	Absorbing Clamp	4.1 dB
Radiated Immunity	3 Volts/meter	2.2 dB
Conducted Immunity	CDN/EM/BCI	2.4/3.5/3.4 dB
EFT Burst/Surge	Peak pulse voltage	164 volts
ESD Immunity	15 kV level	1377 Volts

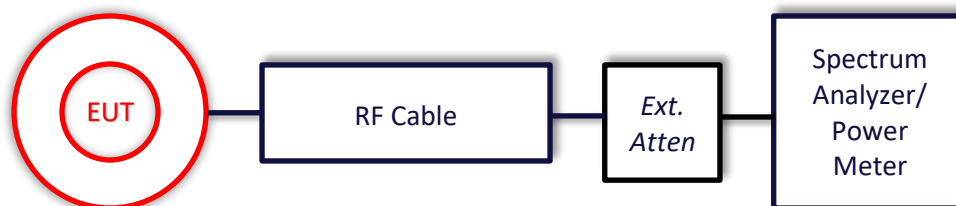
Parameter	ETSI U.C. $\pm$	U.C. $\pm$
Radio Frequency, from F0	1×10^{-7}	0.55×10^{-7}
Occupied Channel Bandwidth	5 %	2 %
RF conducted Power (Power Meter)	1.5 dB	1.2 dB
RF conducted emissions (Spectrum Analyzer)	3.0 dB	1.7 dB
All emissions, radiated	6.0 dB	5.3 dB
Temperature	1° C	0.65° C
Humidity	5 %	2.9 %
Supply voltages	3 %	1 %

5 TEST DATA

5.1 Antenna Port Conducted Emissions

Description of Measurement	The direct measurement of emissions at the antenna port of the EUT is achieved by use of a RF connection to a spectrum analyzer or power meter. The cable and attenuator factors are loaded into the analyzer or power meter allowing for direct measurement readings without the need for further corrections.
Example Calculations	Measurement (dBm) + Cable factor (dB) + External Attenuator (dB) = Corrected Reading (dBm) Margin (dB) = Limit (dBm) – Corrected Reading (dBm)

Block Diagram



5.1.1 6dB and 99% Occupied Bandwidth

Operator	Mitchell Freund	QA	Dylan Rosenfeldt
Temperature	20.7°C	R.H. %	26.8%
Test Date	12/2/2025	Location	Cond Bench
Requirement	15.247(a)(2) RSS-247 Clause 6.3.1(a)	Method	ANSI C63.10

Limits: The minimum 6 dB bandwidth shall be at least 500 kHz

Test Parameters

Frequency	2400-2483.5 MHz	Setup	Connected via Antenna Port
RBW	200 kHz	VBW	620 kHz
Detector(s)	Peak	Settings	Max Hold

Instrumentation

Asset #	Description	Manufacturer	Model #	Serial #	Date	Due Date	Status
AA 960173	Cable	A.H. Systems, Inc.	SAC-26G-1	388	1/28/2025	2/28/2026	Active Verification
EE 960087	Analyzer - Spectrum	Agilent	N9010A	MY53400296	6/1/2025	6/1/2026	Active Calibration

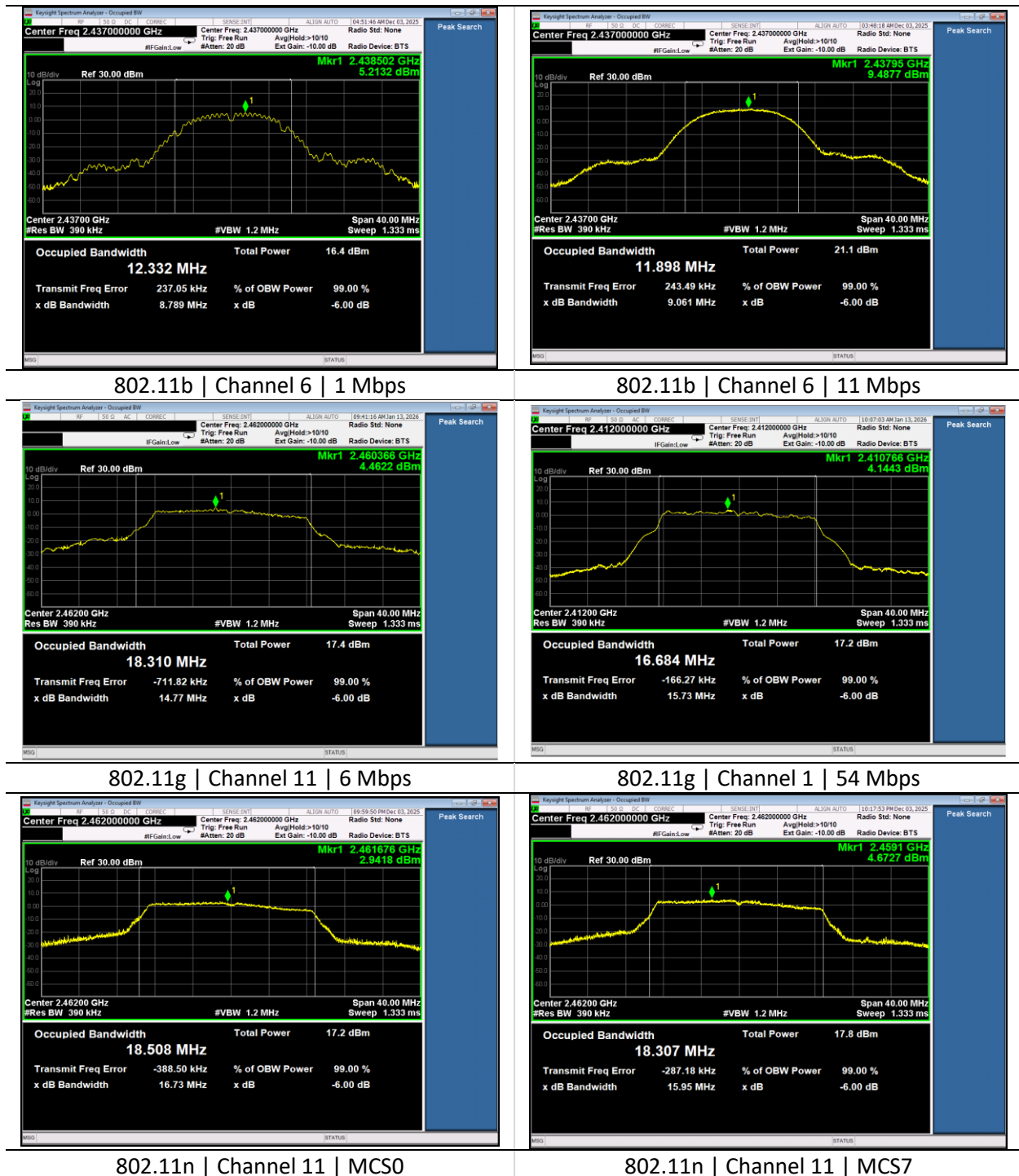
EUT Parameters

Input Power	120 VAC 60 Hz	Mode	2.4 GHz Tx
Frequency	2400-2483.5 MHz	Channel	1, 6, 11

Table

Nominal BW (MHz)	Channel	Mode	MCS	99% OBW (MHz)	6 dB BW (kHz)	Limit (kHz)	Margin (kHz)
20	1	802.11b	CCK-11	12.0	9109	500	8609
20	6	802.11b	CCK-11	11.9	9061	500	8561
20	11	802.11b	CCK-11	12.1	9260	500	8760
20	1	802.11b	CCK-1	12.4	9147	500	8647
20	6	802.11b	CCK-1	12.3	8789	500	8289
20	11	802.11b	CCK-1	12.5	9190	500	8690
20	1	802.11g	6 Mbps	17.3	14950	500	14450
20	6	802.11g	6 Mbps	17.5	16320	500	15820
20	11	802.11g	6 Mbps	18.3	14770	500	14270
20	1	802.11g	54 Mbps	16.7	15730	500	15230
20	6	802.11g	54 Mbps	16.8	16190	500	15690
20	11	802.11g	54 Mbps	17.2	17078	500	16578
20	1	802.11n	MCS0	18.2	17210	500	16710
20	6	802.11n	MCS0	18.3	17300	500	16800
20	11	802.11n	MCS0	18.5	16730	500	16230
20	1	802.11n	MCS7	18.0	16400	500	15900
20	6	802.11n	MCS7	18.1	17350	500	16850
20	11	802.11n	MCS7	18.3	15950	500	15450

Plots



5.1.2 RF Output Power

Operator	Mitchell Freund	QA	Dylan Rosenfeldt
Temperature	20.7°C	R.H. %	26.8%
Test Date	12/2/2025	Location	Cond Bench
Requirement	15.247(b)(3) RSS-247 Clause 6.3.2	Method	ANSI C63.10 11.9.2.2.4 AVGSA-2

Limits: The maximum conducted output power of the intentional radiator shall not exceed 1 Watt.

Test Parameters

Frequency	2400-2483.5 MHz	Setup	Connected via Antenna Port
RBW	390 kHz	VBW	1.2 MHz
Detector(s)	Average, RMS	Settings	Max Hold Span: 30 MHz
Example Calculations	Average Output Power = Measured Power + 10*log(1/D) where D is the duty cycle.		

Instrumentation

Asset #	Description	Manufacturer	Model #	Serial #	Date	Due Date	Status
AA 960173	Cable	A.H. Systems, Inc.	SAC-26G-1	388	1/28/2025	2/28/2026	Active Verification
EE 960087	Analyzer - Spectrum	Agilent	N9010A	MY53400296	6/1/2025	6/1/2026	Active Calibration

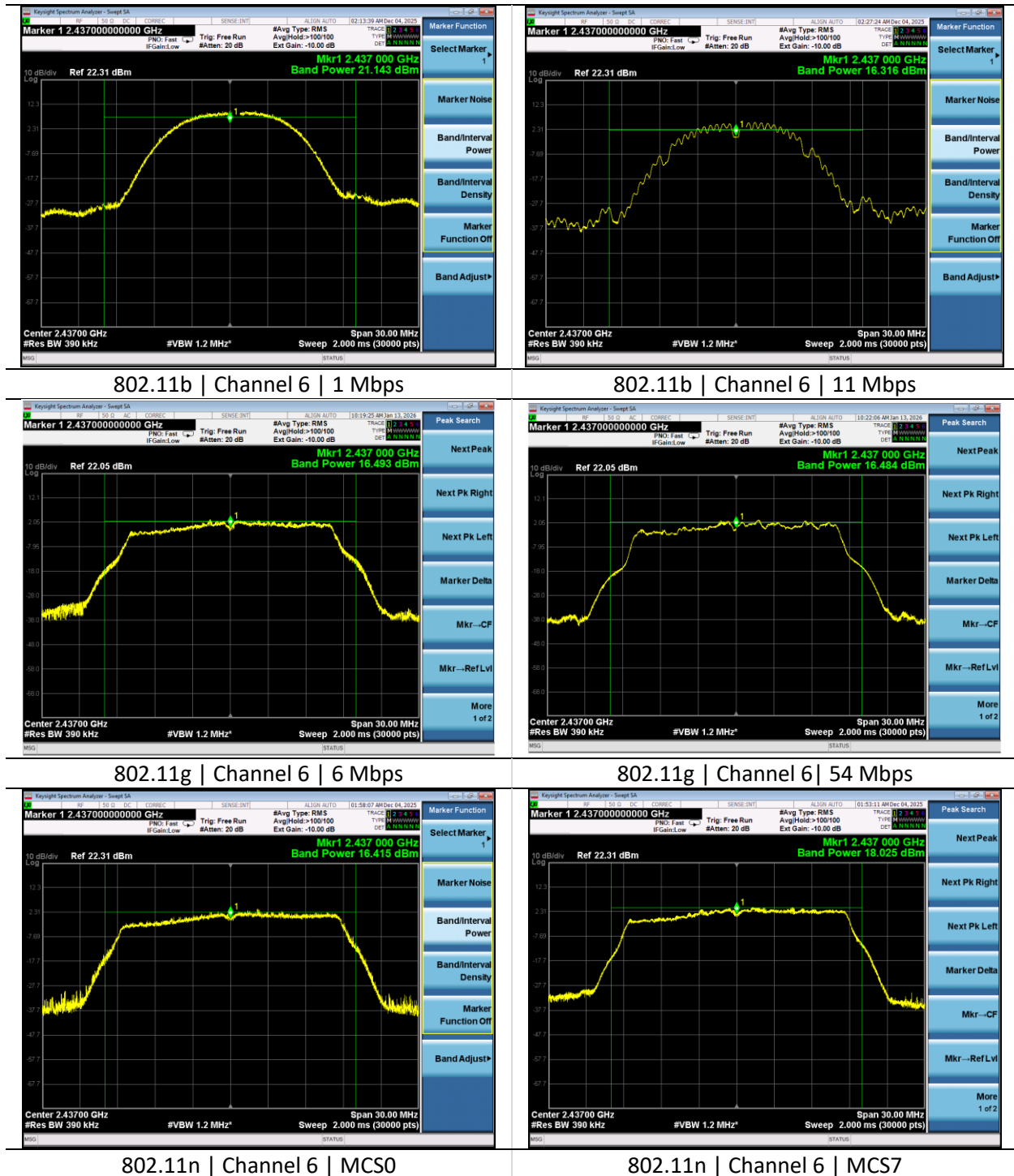
EUT Parameters

Input Power	120 VAC 60 Hz	Mode	2.4 GHz Tx
Frequency	2400-2483.5 MHz	Channel	1, 6, 11

Table

Mode	Rate	Channel	Average Output Power (dBm)	Duty Cycle Correction (dB)	Corrected Output Power (dBm)	Limit (dBm)	Margin (dB)
802.11b	CCK-11	1	22.2	0.6	22.8	30	7.2
802.11b	CCK-11	6	21.1	0.6	21.7	30	8.3
802.11b	CCK-11	11	21.7	0.6	22.3	30	7.7
802.11b	CCK-1	1	17.4	0.6	18.0	30	12.0
802.11b	CCK-1	6	16.3	0.6	16.9	30	13.1
802.11b	CCK-1	11	17.0	0.6	17.6	30	12.4
802.11g	6 Mbps	1	17.8	0.6	18.4	30	11.6
802.11g	6 Mbps	6	16.5	0.6	17.1	30	12.9
802.11g	6 Mbps	11	17.5	0.6	18.1	30	11.9
802.11g	54 Mbps	1	17.2	0.6	17.8	30	12.2
802.11g	54 Mbps	6	16.5	0.6	17.1	30	12.9
802.11g	54 Mbps	11	17.2	0.6	17.8	30	12.2
802.11n	MCS0	1	17.4	0.6	18.0	30	12.0
802.11n	MCS0	6	16.4	0.6	17.0	30	13.0
802.11n	MCS0	11	16.8	0.6	17.4	30	12.6
802.11n	MCS7	1	18.0	0.6	18.6	30	11.4
802.11n	MCS7	6	18.0	0.6	18.6	30	11.4
802.11n	MCS7	11	18.8	0.6	19.4	30	10.6

Plots



5.1.3 Power Spectral Density

Operator	Mitchell Freund	QA	Dylan Rosenfeldt
Temperature	20.2°C	R.H. %	21.8%
Test Date	12/4/2025	Location	Cond Bench
Requirement	15.247(e) RSS-247 Clause 6.3.1(b)	Method	ANSI C63.10 11.10.5 AVGPSD-2

Limits: Power spectral density shall not be greater than 8 dBm in any 3 kHz band.

Test Parameters

Frequency	2400-2483.5 MHz	Setup	Connected via Antenna Port
RBW	75 kHz	VBW	240 kHz

Instrumentation

Asset #	Description	Manufacturer	Model #	Serial #	Date	Due Date	Status
AA 960173	Cable	A.H. Systems, Inc.	SAC-26G-1	388	1/28/2025	2/28/2026	Active Verification
EE 960087	Analyzer - Spectrum	Agilent	N9010A	MY53400296	6/1/2025	6/1/2026	Active Calibration

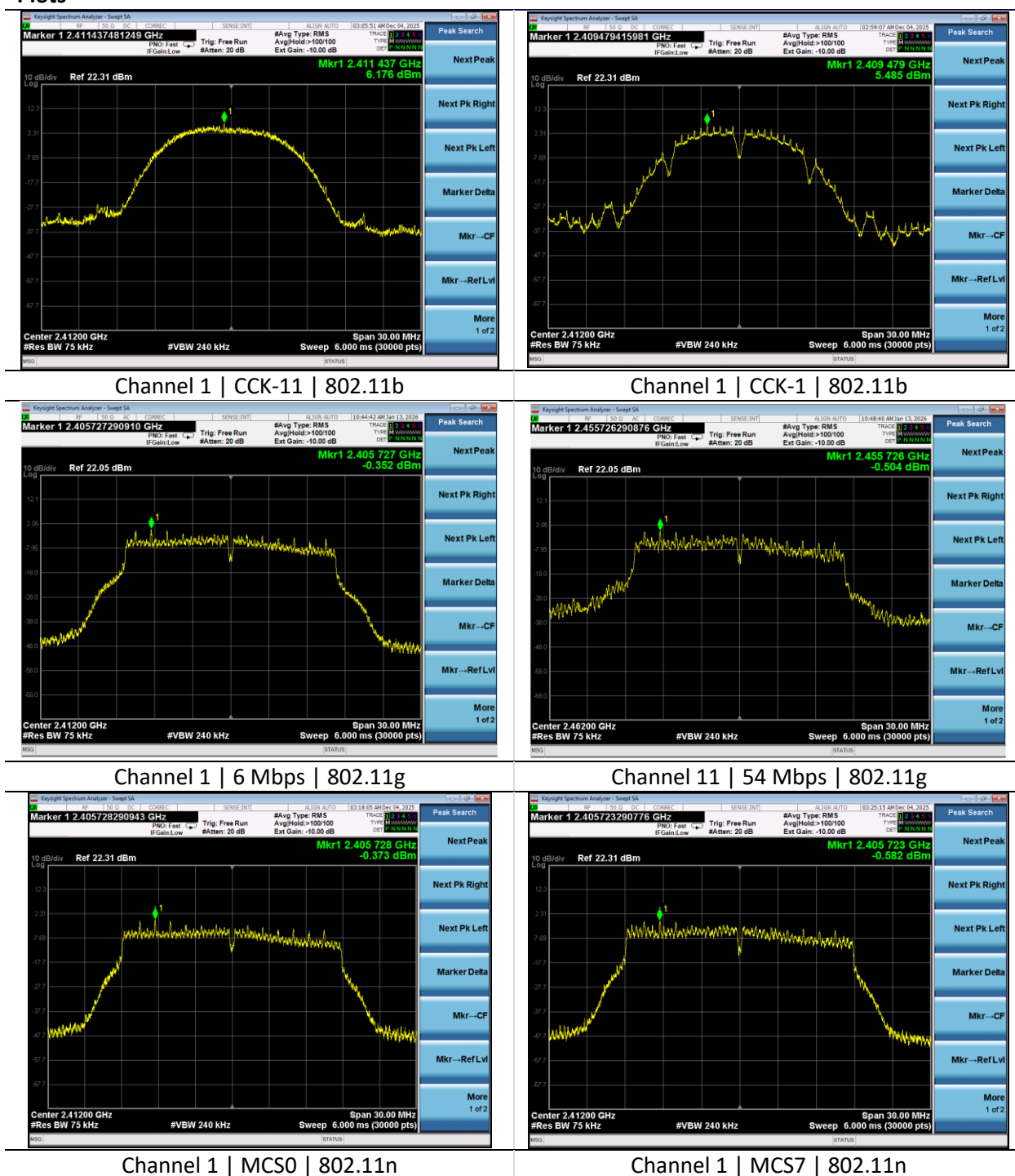
EUT Parameters

Input Power	120 VAC 60 Hz	Mode	2.4 GHz Tx
Frequency	2400-2483.5 MHz	Channel	1, 6, 11

Table

Channel	Mode	MCS	Avg PSD (dBm)	Duty Cycle Correction (dB)	Corrected Output Value (dBm)	Limit (dBm/3kHz)	Margin (dB)
1	802.11b	CCK-11	6.2	0.6	6.8	8	1.2
6	802.11b	CCK-11	5.0	0.6	5.6	8	2.4
11	802.11b	CCK-11	4.1	0.6	4.7	8	3.3
1	802.11b	CCK-1	5.5	0.6	6.1	8	1.9
6	802.11b	CCK-1	4.2	0.6	4.8	8	3.2
11	802.11b	CCK-1	5.1	0.6	5.7	8	2.3
1	802.11g	6 Mbps	-0.4	0.6	0.2	8	7.8
6	802.11g	6 Mbps	-0.9	0.6	-0.3	8	8.3
11	802.11g	6 Mbps	-0.8	0.6	-0.2	8	8.2
1	802.11g	54 Mbps	-0.6	0.6	0.0	8	8.0
6	802.11g	54 Mbps	-1.3	0.6	-0.7	8	8.7
11	802.11g	54 Mbps	-0.5	0.6	0.1	8	7.9
1	802.11n	MCS0	-0.4	0.6	0.2	8	7.8
6	802.11n	MCS0	-1.3	0.6	-0.7	8	8.7
11	802.11n	MCS0	-0.6	0.6	0.0	8	8.0
1	802.11n	MCS7	-0.6	0.6	0.0	8	8.0
6	802.11n	MCS7	-1.2	0.6	-0.6	8	8.6
11	802.11n	MCS7	-1.0	0.6	-0.4	8	8.4

Plots



5.1.4 Out-of-Band Emissions

Operator	Mitchell Freund	QA	Dylan Rosenfeldt
Temperature	20.2°C	R.H. %	21.8%
Test Date	12/4/2025	Location	Cond Bench
Requirement	15.247(d) RSS-247 Clause 6.6 RSS-GEN A1 Clause 8.9	Method	ANSI C63.10 11.10.2

Limits: 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.

Reference Level (Worse Case PSD):

Channel 1 | CCK-11 | 6.8 dbm

6.8 dBm – 30 = -23.2 dBm Limit

Test Parameters

Frequency	2400-2483.5 MHz	Setup	Connected via Antenna Port
RBW	100 kHz	VBW	300 kHz
Detector(s)	Peak		
Example Calculations	Correction Factor = 20 log (1/D), where D is the duty cycle		

Instrumentation

Asset #	Description	Manufacturer	Model #	Serial #	Date	Due Date	Status
AA 960173	Cable	A.H. Systems, Inc.	SAC-26G-1	388	1/28/2025	2/28/2026	Active Verification
EE 960087	Analyzer - Spectrum	Agilent	N9010A	MY53400296	6/1/2025	6/1/2026	Active Calibration

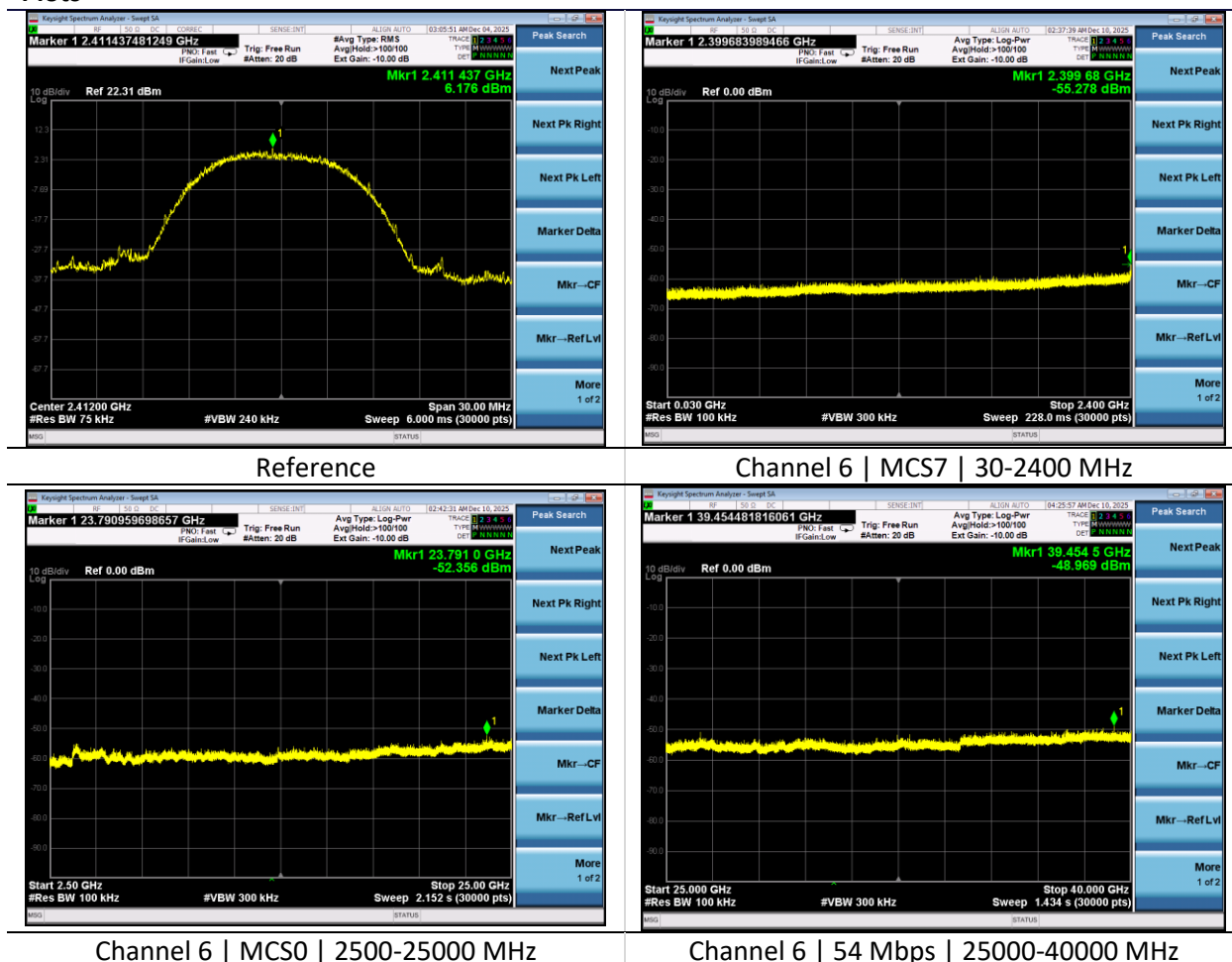
EUT Parameters

Input Power	120 VAC 60 Hz	Mode	2.4 GHz Tx
Frequency	2400-2483.5 MHz	Channel	1, 6, 11

Table

Channel	Rate	Frequency (MHz)	Measurement (dBm)	Limit (dBm)	Margin (dB)
6	1 Mbps	2398.0	-57.4	-23.2	34.2
6	11 Mbps	2396.4	-56.9	-23.2	33.7
6	6 Mbps	2399.8	-56.7	-23.2	33.5
1	54 Mbps	2398.0	-58.1	-23.2	34.9
1	MCS0	2399.1	-57.0	-23.2	33.8
6	MCS7	2399.7	-55.3	-23.2	32.1
11	MCS0	23791.0	-52.4	-23.2	29.2
6	MCS7	23795.5	-52.6	-23.2	29.4
6	54 Mbps	23898.2	-52.4	-23.2	29.2
6	6 Mbps	23971.7	-53.0	-23.2	29.8
11	11 Mbps	24101.5	-52.5	-23.2	29.3
6	1 Mbps	24062.5	-52.7	-23.2	29.5
6	1 Mbps	38840.5	-49.8	-23.2	26.6
1	11 Mbps	39239.0	-49.9	-23.2	26.7
6	6 Mbps	38451.9	-49.7	-23.2	26.5
11	54 Mbps	39454.5	-49.0	-23.2	25.8
6	MCS0	38632.5	-49.6	-23.2	26.4
6	MCS7	39129.5	-49.6	-23.2	26.4

Plots



5.1.5 Frequency Stability

Operator	Mitchell Freund	QA	Dylan Rosenfeldt
Temperature	22.9°C	R.H. %	29.8%
Test Date	1/13/2025	Location	Cond. Bench
Requirement	15.407(g) RSS-GEN Clause 6.11	Method	ANSI C63.10.6.8

Test Parameters

Frequency	2402-2483.5 MHz	Setup	Connected via Antenna Port
Detector(s)	Peak		
Settings	Max Hold		

Instrumentation

Asset #	Description	Manufacturer	Model #	Serial #	Date	Due Date	Status
AA 960173	Cable	A.H. Systems, Inc.	SAC-26G-1	388	1/28/2025	2/28/2026	Active Verification
EE 960087	Analyzer - Spectrum	Agilent	N9010A	MY53400296	6/1/2025	6/1/2026	Active Calibration

EUT Parameters

Input Power	120 VAC 60 Hz	Mode	2.4 GHz Tx
Frequency	2400-2483.5 MHz	Channel	1, 6, 11

Table

Channel	Voltage	Frequency (Hz)
1	102	2411984468
	120	2411984395
	138	2411997173
6	102	2436984268
	120	2436983709
	138	2436985891
11	102	2461984194
	120	2461983521
	138	2461985752

5.2 Radiated Emissions

Description of Measurement	The frequency spectrum is investigated for intentional and / or unintentional signals emanating from the EUT by use of a standardized test site and measurement antenna. The antenna, cable, pre-amp, and other necessary measurement system correction factors are loaded onto the EMI receiver / spectrum analyzer when the measurements are performed allowing the data to be gathered and reported as corrected values. The maximum emissions from the EUT are determined by turn-table azimuth rotation (360°) and scanning of the measurement antenna. Maximized levels are noted at degree values of azimuth, measurement antenna height, and measurement antenna polarity.
Example Calculations	Measurement (dBμV) + Cable factor (dB) + Other (dB) + Antenna Factor (dB/m) = Corrected Reading (dBμV/m) Margin (dB) = Limit (dBμV/m) - Corrected Reading (dBμV/m) Example at 4000 MHz: Reading = 40 dBμV + 3.4 dB + 0.9 dB + 6.5 dB/m = 50.8 dBμV/m Average Limit = 20 log (500) = 54 dBμV/m Margin = 54 dBμV/m - 50.8 dBμV/m = 3.2 dB

Block Diagram



5.2.1 Radiated Emissions

Operator	Mitchell Freund, Marcos Pineda, Cheikhna Ouattara	QA	Dylan Rosenfeldt, Adam Alger, Anthony Smith
Temperature	24.1°C	R.H. %	26.5%
Test Date	12/9/2025-1/21/2026	Location	Chamber 3 and 5
Requirement	15.247(d) 15.209 RSS-247 Clause 6.6 RSS-GEN Clause 8.10	Method	ANSI C63.10

15.209 Limits:

Frequency (MHz)	Quasi-Peak Limit (dBμV/m)	Average Limit (dBμV/m)	Peak Limit (dBμV/m)
30-88	40.0	-	-
88-216	43.5	-	-
216-960	46.0	-	-
960-1000	54.0	-	-
1000-40000	-	54.0	74.0

Test Parameters

Frequency	30-40000 MHz	Distance	3 Meters
Detector(s)	Peak Trace Peak, QP, Average	Table height	150 cm
RBW	<1000 MHz – 120 kHz >1000 – 1 MHz	VBW	<1000 – 1.2 MHz >1000 – See 2.9

Instrumentation

Asset #	Description	Manufacturer	Model #	Serial #	Date	Due Date	Status
LSC-300	Cable	Chamber 3 Emissions	-	-	1/24/2025	2/24/2026	Active Verification
LSC-500	Cable	Chamber 5 Emissions	-	-	1/27/2025	2/27/2026	Active Verification
AA 960220	Cable	A.H. Systems, Inc.	SAC-26G-6	552	1/28/2025	1/28/2026	Active Verification
AA 960162	Cable	MegaPhase	EM2-S1S1-120	51503501001	1/28/2025	1/28/2026	Active Verification
AA 960194	Antenna - Biconical	A.H. Systems, Inc.	SAS-540	780	10/9/2025	10/9/2026	Active Calibration
AA 960163	Antenna - Log Periodic	A.H. Systems, Inc.	SAS-512-2	500	10/8/2025	10/8/2026	Active Calibration
AA 960007	Antenna - Double Ridge Horn	EMCO	3115	9311-4138	9/24/2025	9/24/2026	Active Calibration
AA 960081	Antenna - Double Ridge Horn	EMCO	3115	6907	10/8/2025	10/8/2026	Active Calibration
AA 960174	Antenna - Small Horn	ETS Lindgren	3116C-PA	00206880	10/7/2025	10/7/2026	Active Calibration
AA 960153	Filter - High Pass 2.4 GHz	KWM	HPF-L-14186	7272-04	4/3/2025	4/3/2026	Active Calibration
AA 960154	Filter - High Pass 2.4 GHz	KWM	HPF-L-14186	7272-02	4/3/2025	4/3/2026	Active Calibration
AA 960209	Antenna - Low Noise Amplifier	Mini-Circuits	ZVA-213X-S+	037101808	9/24/2025	9/24/2026	Active Calibration
AA 960194	Antenna - Biconical	A.H. Systems, Inc.	SAS-540	780	10/9/2025	10/9/2026	Active Calibration
EE 960067	Generator - Signal	HP	8648A	3636A02735	4/1/2025	4/1/2026	Active Calibration
EE 960085	Analyzer - EMI Receiver	Agilent	N9038A	MY51210148	4/3/2025	4/3/2026	Active Calibration
EE 960203	Analyzer - EMI Receiver	Keysight	N9038A	MY56400072	4/2/2025	4/2/2026	Active Calibration

EUT Parameters

Input Power	120 VAC 60 Hz	Mode	2.4GHz Tx
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Company: Geberit International AG	Page 26 of 32	Name: 116.495.00.1
Report: TR3939H		Model: GW-21-A
Quote: NBO-01-2024-006892-4		Serial: Engineering Sample

Under 1 GHz Table

Frequency (MHz)	Antenna Polarity	Height (cm)	Azimuth (degree)	Quasi-Peak Reading (dBμV/m)	Quasi-Peak Limit (dBμV/m)	Quasi-Peak Margin (dB)
157.7	H	200	37	28.2	43.5	15.3
84.8	V	100	296	26.9	40.0	13.1
158.8	V	100	65	30.5	43.5	13.0
882.5	H	100	0	29.5	46.0	16.5
959.0	V	100	0	30.2	46.0	15.8
204.4	V	100	270	23.9	43.5	19.6

Above 1 GHz Table - Peak

Frequency (MHz)	Antenna Polarity	Height (cm)	Azimuth (degree)	Peak Reading (dBμV/m)	Peak Limit (dBμV/m)	Peak Margin (dB)	Note
2225.9	H	290	200	47.5	74.0	26.5	Low, 1Mbps
2239.3	V	150	186	48.1	74.0	25.9	Low, 1Mbps
3798.8	H	150	250	54.3	74.0	19.7	High, 1Mbps
3803.9	V	150	158	53.5	74.0	20.5	High, 1Mbps
2483.6	V	150	160	57.3	74.0	16.7	High, 1Mbps
2483.7	H	150	247	50.5	74.0	23.5	High, 1Mbps
2484.3	H	150	211	50.7	74.0	23.3	High, 11Mbps
2483.9	V	155	160	56.6	74.0	17.4	High, 11Mbps
2390.0	V	150	164	54.3	74.0	19.7	Low, 11Mbps
2389.5	H	150	250	51.6	74.0	22.4	Low, 11Mbps
2390.0	H	290	210	51.8	74.0	22.2	Low, 1Mbps
2389.4	V	150	172	51.5	74.0	22.5	Low, 1Mbps
2389.8	V	150	178	61.9	74.0	12.1	Low, 6Mbps
2389.4	H	160	162	60.1	74.0	13.9	Low, 6Mbps
2389.4	H	150	243	57.9	74.0	16.1	Low, 54Mbps
2389.9	V	150	171	59.9	74.0	14.1	Low, 54Mbps
2483.9	V	150	177	62.5	74.0	11.5	High, 6Mbps
2483.9	H	150	221	62.4	74.0	11.6	High, 6Mbps
2483.8	V	160	170	71.2	74.0	2.8	High, 54Mbps
2484.1	H	145	226	62.5	74.0	11.5	High, 54Mbps
2483.6	H	150	200	63.5	74.0	10.5	High, MCS0
2483.7	V	150	217	70.4	74.0	3.6	High, MCS0
2483.6	V	150	167	71.2	74.0	2.8	High, MCS7
2483.7	H	150	193	62.4	74.0	11.6	High, MCS7
2387.7	H	150	222	57.4	74.0	16.6	Low, MCS7
2389.8	V	162	178	58.9	74.0	15.1	Low, MCS7
2389.7	V	150	170	59.0	74.0	15.0	Low, MCS0
2389.8	H	150	204	56.2	74.0	17.8	Low, MCS0
17815.2	H	150	172	59.7	74.0	14.3	Med, 1Mbps
14108.9	H	150	68	50.9	74.0	23.1	Med, 1Mbps
11920.7	H	150	142	49.5	74.0	24.5	Med, 1Mbps
17869.2	V	150	214	59.5	74.0	14.5	Med, 1Mbps
11797.0	V	150	47	48.8	74.0	25.2	Med, 1Mbps
7387.5	V	150	100	44.5	74.0	29.5	Med, 1Mbps

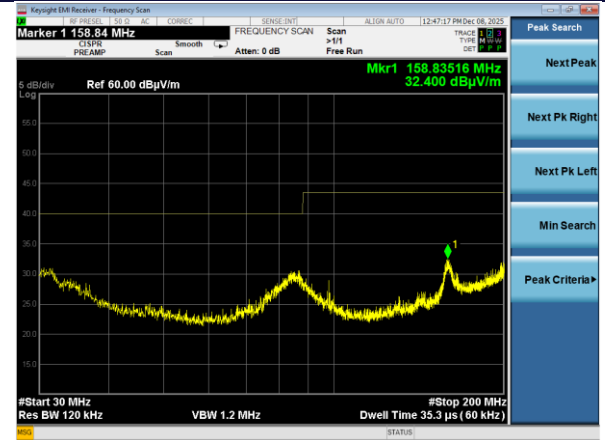
Above 1 GHz Table - Average

Frequency (MHz)	Antenna Polarity	Height (cm)	Azimuth (degree)	Average Reading (dBμV/m)	Average Limit (dBμV/m)	Average Margin (dB)	Note
2293.5	H	290	200	34.7	54.0	19.3	Low, 1Mbps
2298.0	V	150	186	34.6	54.0	19.4	Low, 1Mbps
3887.4	H	150	250	41.1	54.0	12.9	High, 1Mbps
3888.5	V	150	158	41.2	54.0	12.8	High, 1Mbps
2483.5	V	150	160	43.7	54.0	10.3	High, 1Mbps
2483.5	H	150	247	40.2	54.0	13.8	High, 1Mbps
2483.5	H	150	211	38.8	54.0	15.2	High, 11Mbps
2483.5	V	155	160	41.1	54.0	12.9	High, 11Mbps
2390.0	V	150	164	41.4	54.0	12.6	Low, 11Mbps
2389.9	H	150	250	40.1	54.0	13.9	Low, 11Mbps
2390.0	H	290	210	41.3	54.0	12.7	Low, 1Mbps
2390.0	V	150	172	41.4	54.0	12.6	Low, 1Mbps
2389.8	V	150	178	41.8	54.0	12.2	Low, 6Mbps
2389.9	H	160	162	41.7	54.0	12.3	Low, 6Mbps
2389.9	H	150	243	38.8	54.0	15.2	Low, 54Mbps
2390.0	V	150	171	40.4	54.0	13.6	Low, 54Mbps
2483.5	V	150	177	43.2	54.0	8.8	High, 6Mbps
2483.5	H	150	221	45.5	54.0	8.5	High, 6Mbps
2438.5	V	160	170	49.1	54.0	4.9	High, 54Mbps
2483.5	H	145	226	42.9	54.0	11.1	High, 54Mbps
2483.6	H	150	200	39.8	54.0	14.2	High, MCS0
2483.5	V	150	217	46.8	54.0	7.2	High, MCS0
2483.5	V	150	167	48.5	54.0	5.5	High, MCS7
2483.5	H	150	193	41.5	54.0	12.5	High, MCS7
2390.0	H	150	222	40.5	54.0	13.5	Low, MCS7
2389.9	V	162	178	41.6	54.0	12.4	Low, MCS7
2390.0	V	150	170	42.1	54.0	11.9	Low, MCS0
2390.0	H	150	204	40.6	54.0	13.4	Low, MCS0
17869.8	H	150	172	48.0	54.0	6.0	Med, 1Mbps
14274.6	H	150	68	38.4	54.0	15.6	Med, 1Mbps
11809.2	H	150	142	36.8	54.0	17.2	Med, 1Mbps
17855.3	V	150	214	48.0	54.0	6.0	Med, 1Mbps
12030.9	V	150	47	36.7	54.0	17.3	Med, 1Mbps
7995.2	V	150	100	34.1	54.0	19.9	Med, 1Mbps

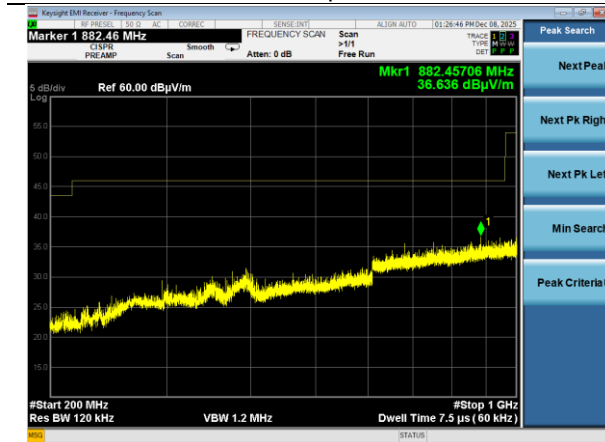
Plots



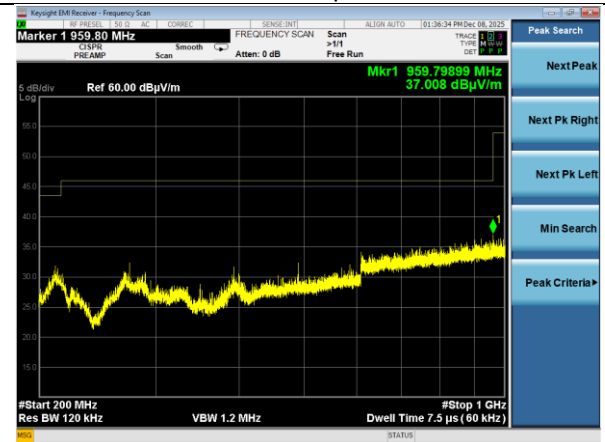
Mid Channel | Channel 6 | 1 Mbps
30-200 MHz | Horizontal



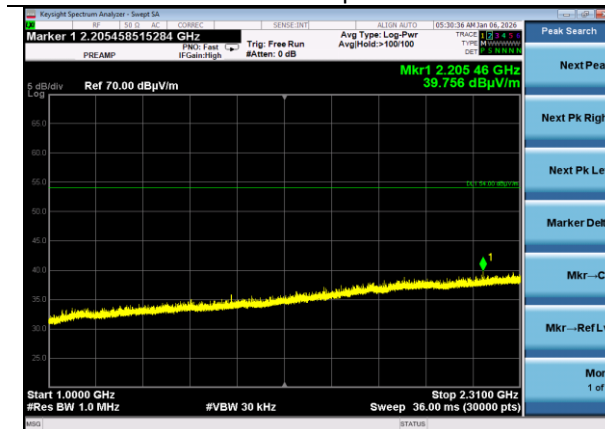
Mid Channel | Channel 6 | 1 Mbps
30-200 MHz | Vertical



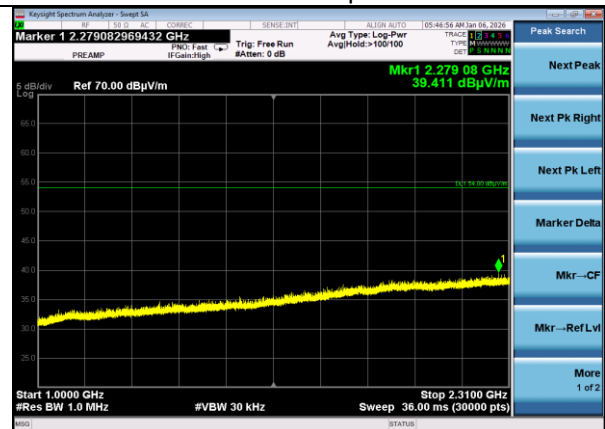
Mid Channel | Channel 6 | 1 Mbps
200-1000 MHz | Horizontal



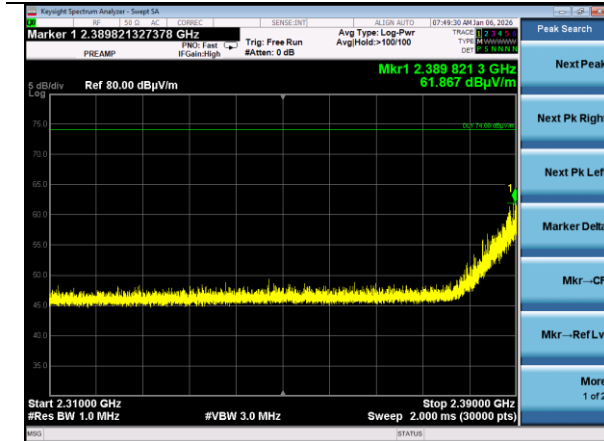
Mid Channel | Channel 6 | 1 Mbps
200-1000 MHz | Vertical



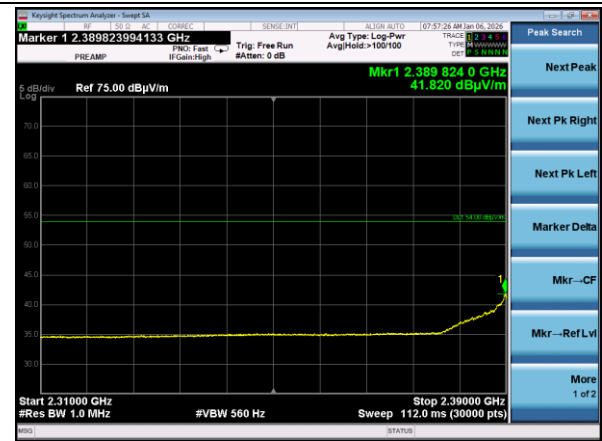
Low Channel | Channel 1 | 1 Mbps
1000-2310 MHz | Horizontal



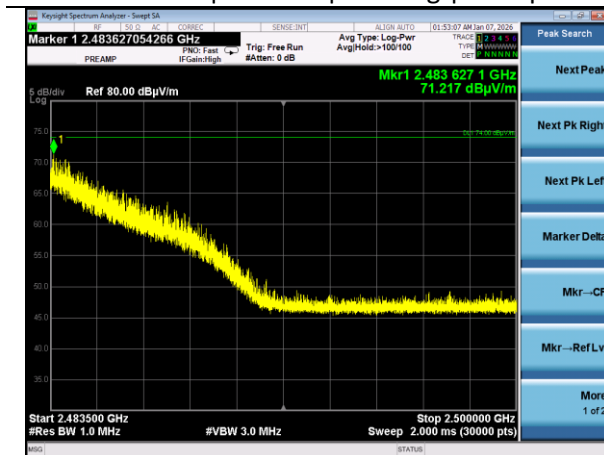
Low Channel | Channel 1 | 1 Mbps
1000-2310 MHz | Vertical



Worst Case Low Channel Peak
Channel 1 | Vertical | 802.11g | 6 Mbps



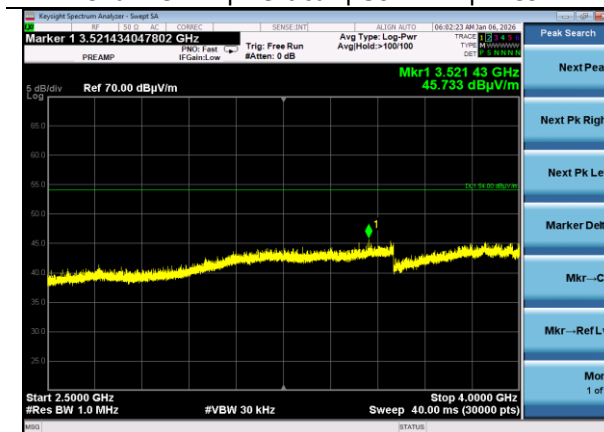
Worst Case Low Channel Average
Channel 1 | Vertical | 802.11g | 6 Mbps



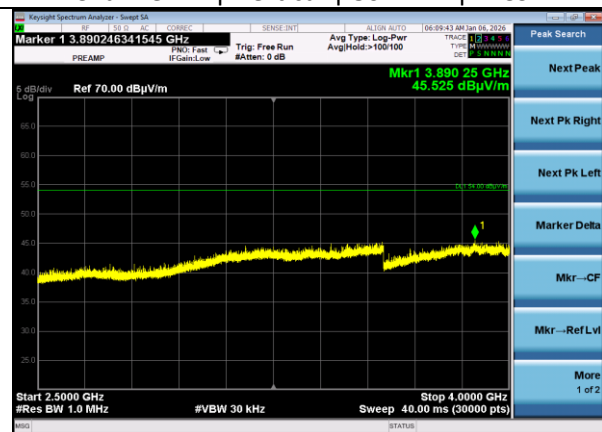
Worst Case High Channel Peak
Channel 11 | Vertical | 802.11n | MCS7



Worst Case High Channel Average
Channel 11 | Vertical | 802.11n | MCS7



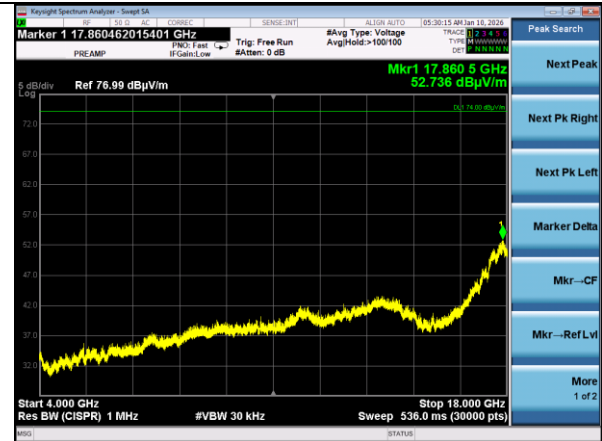
High Channel | Channel 11 | 1 Mbps
2500-4000 MHz | Horizontal



High Channel | Channel 11 | 1 Mbps
2500-4000 MHz | Vertical



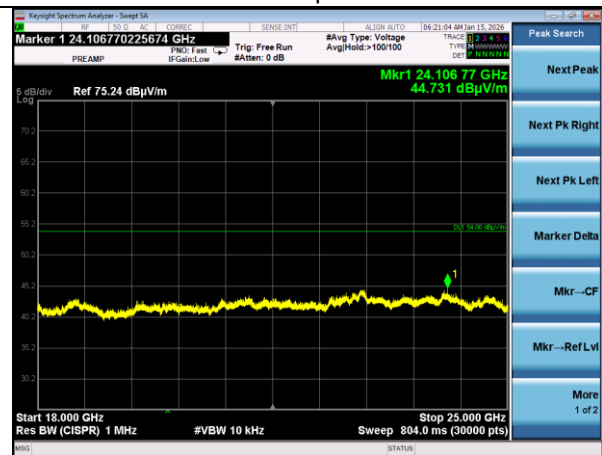
Mid Channel | Channel 6 | 1 Mbps
4-18 GHz | Horizontal



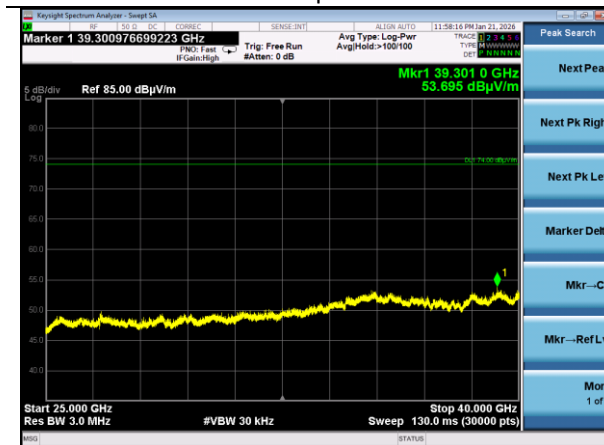
Mid Channel | Channel 6 | 1 Mbps
4-18 GHz | Vertical



Mid Channel | Channel 6 | 1 Mbps
18-25 GHz | Horizontal



Mid Channel | Channel 6 | 1 Mbps
18-25 GHz | Vertical



Mid Channel | Channel 6 | 1 Mbps
25-40 GHz | Horizontal



Mid Channel | Channel 6 | 1 Mbps
25-40 GHz | Vertical

6 REVISION HISTORY

Version	Date	Notes	Person
0.0	2/8/2026	Initial Draft	Mitchell Freund
1.0	3/31/2026	Revised Draft	Mitchell Freund
2.0	4/29/2026	CETECOM Comments Addressed	Mitchell Freund

END OF REPORT