

TEST REPORT

ACCORDING TO:

FCC 47CFR part 15 subpart C § 15.209

RSS-210 issue 11 section 8.2, RSS-Gen issue 5

FOR:

Agrident GmbH

ABR200 Module

Model: ABR200

FCC ID: QG2ARM1

IC: 6252A-ARM1

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1 Applicant information

Client name: Agrident GmbH
Address: Dahlkampsanger 2, 30890 Barsinghausen, Germany
Telephone: +972543233089
E-mail: Tal.cohen@msd.com
Contact name: Mr. Tal Cohen

2 Equipment under test attributes

Product name: ABR200 Module
Product type: RFID module
Model: ABR200
Serial number: 1204000101
Hardware version: 2.0
Software release: 1.33
Receipt date: 23-Jan-26

3 Manufacturer information

Manufacturer name: Agrident GmbH
Address: Dahlkampsanger 2, 30890 Barsinghausen, Germany
Telephone: +972543233089
E-Mail: Tal.cohen@msd.com
Contact name: Mr. Tal Cohen

4 Test details

Project ID: 173034
Location: Hermon Laboratories Ltd. P.O. Box 23, Binyamina 3055001, Israel
Test started: 10-Feb-26
Test completed: 23-Feb-26
Test specification(s): FCC 47CFR part 15 subpart C § 15.209, RSS-210 issue 11 section 8.2, RSS-Gen issue 5

5 Tests summary

Test	Status
Transmitter characteristics	
Section 15.209, / RSS-Gen, Section 6.5, 6.6 Field strength of emissions	Pass
Section 15.215 / RSS-Gen, Section 6.7, Occupied bandwidth	Pass
Section 15.207(a) / RSS-Gen, Section 7.2, Conducted emission	Pass
Section 15.203 / RSS Gen Section 6.8, Antenna requirements	Pass

Testing was completed against the relevant requirements of the test standard. The results obtained indicate that the product under test complies in full with the requirements tested.
The test results relate only to the items tested. Pass/ fail decision was based on nominal values.

	Name and Title	Date	Signature
Tested by:	Mrs. N. Lenkina, test engineer, EMC & Radio	10-Feb-26 – 23-Feb-26	
Reviewed by:	Mrs. S. Peysahov Sheynin, certification engineer, EMC & Radio	25-Mar-26	
Approved by:	Mr. M. Nikishin, group leader, EMC & Radio	14-May-26	

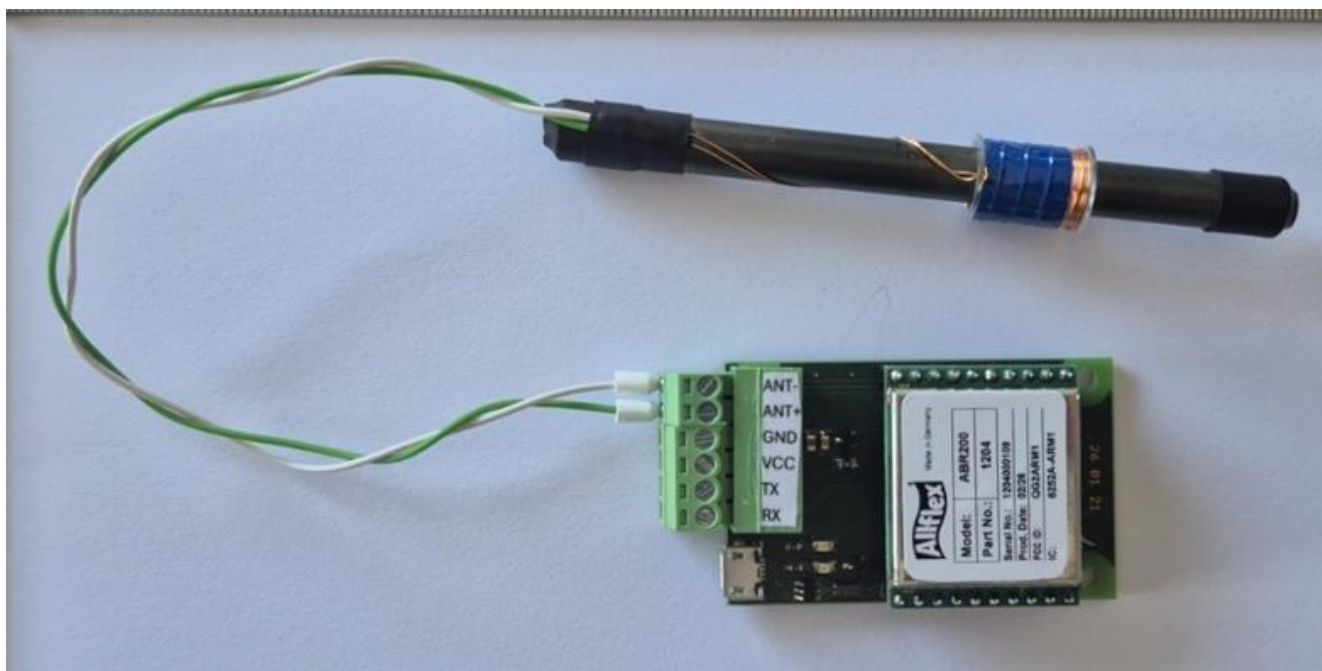
6 EUT description

Note: The following data in this clause is provided by the customer and represents his sole responsibility

6.1 General information

The EUT is the ABR200 a RFID reader which is supplied with 2.5-4.5V DC. The ABR200 was developed for the integration into mobile devices.

6.2 Test configuration



6.3 Transmitter characteristics

Type of equipment							
V	Stand-alone (Equipment with or without its own control provisions)						
	Combined equipment (Equipment where the radio part is fully integrated within another type of equipment)						
	Plug-in card (Equipment intended for a variety of host systems)						
Intended use				Condition of use			
Permitted range of operating frequencies				119 – 135 kHz			
Operating frequency range				134.196 kHz			
RF channel spacing				NA			
Maximum E-field strength				77.97 dB(μV/m) AVR @10m			
Maximum RF carrier current				NA			
Is transmitter output power variable?				V No			
				Yes continuous variable			
				stepped variable with stepsize dB			
Antenna connection							
V	permanently attached antenna	standard connector	integral	with temporary RF connector			
				without temporary RF connector			
Antenna/s technical characteristics							
Type		Model		Loop antenna area, m2		Gain	
Ferrite antenna		ROD8/100 275μH		NA		NA	
Product class							
V	1						
	2						
	3						
	4						
Type of modulation				ASK / FSK			
Modulating test signal (baseband)				NA			
Maximum transmitter duty cycle in normal use				100 %	Tx ON time	msec	Period
Transmitter duty cycle supplied for test				100 %	Tx ON time	msec	Period
Transmitter power source							
	Battery	Nominal rated voltage	VDC				
V	DC	Nominal rated voltage	4.5 VDC				
	AC mains	Nominal rated voltage	VAC	Frequency	Hz		
Common power source for transmitter and receiver							
yes no							



Test specification: Section 15.209 / RSS-Gen, Section 6.5, 6.6 Field strength of emissions			
Test procedure: ANSI C63.10, Section 6.4, 6.5			
Test mode: Compliance		Verdict: PASS	
Date(s): 10-Feb-26 – 23-Feb-26			
Temperature: 21 °C	Relative Humidity: 54 %	Air Pressure: 1012 hPa	Power: 4.5 VDC
Remarks:			

7 Transmitter tests according to 47CFR part 15 subpart C and RSS-210 requirements

7.1 Field strength of emissions

7.1.1 General

This test was performed to measure field strength of fundamental and spurious emissions from the EUT. Specification test limits are given Table 7.1.1 and Table 7.1.2.

Table 7.1.1 Radiated fundamental emission limits

Fundamental frequency, kHz	Field strength at 10 m, dB(μV/m)	
	Peak	Average
134.196	104.14	84.14

Table 7.1.2 Radiated spurious emissions limits

Frequency, MHz	Field strength at 3 m, dB(μV/m)		
	Within restricted bands		
	Peak	Quasi Peak	Average
0.009 – 0.090	148.5 – 128.5	NA	128.5 – 108.5**
0.090 – 0.110	NA	108.5 – 106.8**	NA
0.110 – 0.490	126.8 – 113.8	NA	106.8 – 93.8**
0.490 – 1.705	NA	73.8 – 63.0**	NA
1.705 – 30.0*		69.5	
30 – 88		40.0	
88 – 216		43.5	
216 – 960		46.0	
960 - 1000		54.0	
1000 – 10 th harmonic	74.0	NA	54.0

*- The limit for 3 m test distance was calculated using the inverse square distance extrapolation factor as follows:

$$\text{Lims}_2 = \text{Lims}_1 + 40 \log (S_1/S_2),$$

where S_1 and S_2 – standard defined and test distance respectively in meters.

** - The limit decreases linearly with the logarithm of frequency.

Test specification: Section 15.209 / RSS-Gen, Section 6.5, 6.6 Field strength of emissions			
Test procedure: ANSI C63.10, Section 6.4, 6.5			
Test mode: Compliance		Verdict: PASS	
Date(s): 10-Feb-26 – 23-Feb-26			
Temperature: 21 °C	Relative Humidity: 54 %	Air Pressure: 1012 hPa	Power: 4.5 VDC
Remarks:			

7.1.2 Test procedure for fundamental and spurious emission field strength measurements in 9 kHz to 30 MHz

7.1.2.1 The EUT was set up as shown in Figure 7.1.1, energized and the performance check was conducted.

7.1.2.2 The specified frequency range was investigated with a loop antenna connected to spectrum analyzer/ EMI receiver. To find maximum radiation the turntable was rotated 360°, the measuring antenna was rotated around its vertical axis. The measuring antenna polarization was switched from vertical to horizontal.

7.1.2.3 The worst test results (the lowest margins) were recorded in Table 7.1.3 and shown in the associated plots.

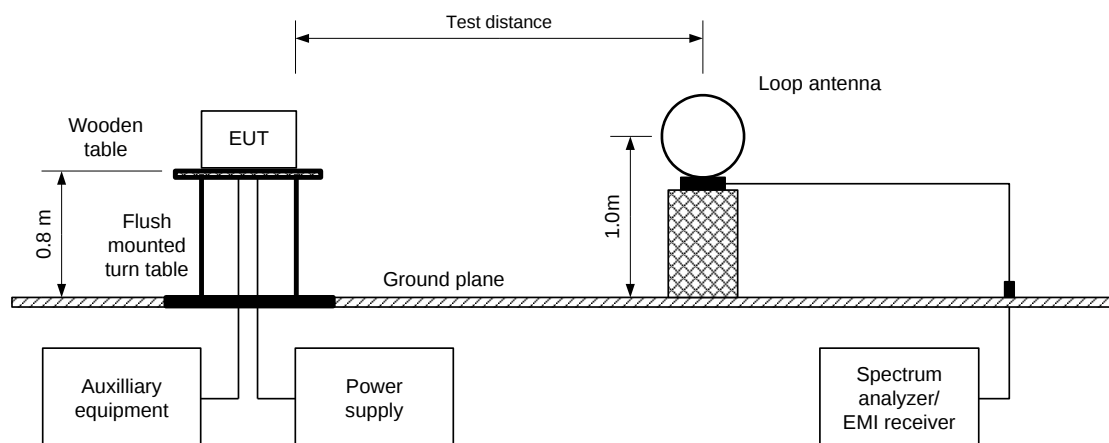
7.1.3 Test procedure for spurious emission field strength measurements above 30 MHz

7.1.3.1 The EUT was set up as shown in Figure 7.1.2, energized and the performance check was conducted.

7.1.3.2 The specified frequency range was investigated with antenna connected to spectrum analyzer/ EMI receiver. To find maximum radiation the turntable was rotated 360°, the measuring antenna height was changed from 1 to 4 m, its polarization was switched from vertical to horizontal.

7.1.3.3 The worst test results (the lowest margins) were recorded in Table 7.1.4 and shown in the associated plots.

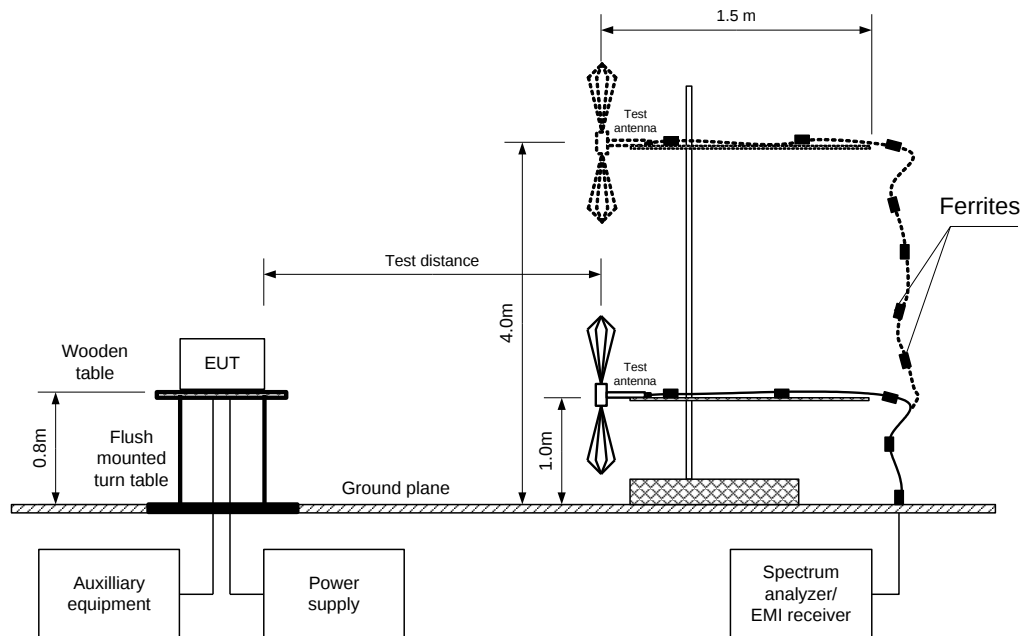
Figure 7.1.1 Setup for spurious emission field strength measurements below 30 MHz





Test specification: Section 15.209 / RSS-Gen, Section 6.5, 6.6 Field strength of emissions			
Test procedure: ANSI C63.10, Section 6.4, 6.5			
Test mode: Compliance		Verdict: PASS	
Date(s): 10-Feb-26 – 23-Feb-26			
Temperature: 21 °C	Relative Humidity: 54 %	Air Pressure: 1012 hPa	Power: 4.5 VDC
Remarks:			

Figure 7.1.2 Setup for spurious emission field strength measurements above 30 MHz





Test specification: Section 15.209 / RSS-Gen, Section 6.5, 6.6 Field strength of emissions			
Test procedure: ANSI C63.10, Section 6.4, 6.5			
Test mode: Compliance		Verdict: PASS	
Date(s): 10-Feb-26 – 23-Feb-26			
Temperature: 21 °C	Relative Humidity: 54 %	Air Pressure: 1012 hPa	Power: 4.5 VDC
Remarks:			

Table 7.1.3 Field strength of fundamental emission

TEST DISTANCE:	10 m
TEST SITE:	OATS
EUT POSITION:	Typical
TRANSMITTER OUTPUT POWER SETTINGS:	Maximum
INVESTIGATED FREQUENCY RANGE:	119-135 kHz
DETECTOR USED:	Average
RESOLUTION BANDWIDTH:	1 kHz (9 kHz – 150 kHz)
VIDEO BANDWIDTH:	≥ Resolution bandwidth
TEST ANTENNA TYPE:	Active loop (9 kHz – 30 MHz)

Frequency, kHz	Peak emission, dB(μV/m)	Average			Antenna polarization	Antenna height, m	Turn-table position**, degrees	Verdict
		Measured emission, dB(μV/m)	Limit, dB(μV/m)	Margin, dB*				
134.196	80.53	77.97	84.14	-6.17	V	1.0	-180	Pass

*- Margin = Measured emission - specification limit.

**- EUT front panel refer to 0 degrees position of turntable.

Reference numbers of test equipment used

HL 0446	HL 3903	HL 5288	HL 5902	HL 7585	HL 5376	HL 5410	HL 5664
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Full description is given in Appendix A.



Test specification: Section 15.209 / RSS-Gen, Section 6.5, 6.6 Field strength of emissions			
Test procedure: ANSI C63.10, Section 6.4, 6.5			
Test mode: Compliance		Verdict: PASS	
Date(s): 10-Feb-26 – 23-Feb-26			
Temperature: 21 °C	Relative Humidity: 54 %	Air Pressure: 1012 hPa	Power: 4.5 VDC
Remarks:			

Table 7.1.4 Field strength of spurious emissions

TEST DISTANCE: 3 m
 TEST SITE: Semi anechoic chamber
 EUT POSITION: Typical
 TRANSMITTER OUTPUT POWER SETTINGS: Maximum
 INVESTIGATED FREQUENCY RANGE: 0.009 – 1000 MHz
 DETECTOR USED: Quasi-peak
 RESOLUTION BANDWIDTH: 1 kHz (9 kHz – 150 kHz)
 9.0 kHz (150 kHz – 30 MHz)
 120 kHz (30 MHz – 1000 MHz)
 VIDEO BANDWIDTH: ≥ Resolution bandwidth
 TEST ANTENNA TYPE: Active loop (9 kHz – 30 MHz)
 Biconilog (30 MHz – 1000 MHz)

Frequency, MHz	Peak emission, dB(μV/m)	Quasi-peak			Antenna polarization	Antenna height, m	Turn-table position**, degrees	Verdict
		Measured emission, dB(μV/m)	Limit, dB(μV/m)	Margin, dB*				
34.746	36.53	33.46	40.00	-6.54	Vertical	1.00	32	Pass
40.657	34.86	31.27	40.00	-8.73	Vertical	1.00	8	
55.156	34.60	30.62	40.00	-9.38	Vertical	1.00	-180	
62.936	28.41	23.33	40.00	-16.67	Vertical	1.41	-180	
75.135	26.11	21.13	40.00	-18.87	Vertical	1.00	-61	

*- Margin = Measured emission - specification limit.

** - EUT front panel refer to 0 degrees position of turntable.

Reference numbers of test equipment used

HL 0446	HL 3903	HL 5288	HL 5902	HL 7585			
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Full description is given in Appendix A.



Test specification: Section 15.209 / RSS-Gen, Section 6.5, 6.6 Field strength of emissions			
Test procedure: ANSI C63.10, Section 6.4, 6.5			
Test mode: Compliance		Verdict: PASS	
Date(s): 10-Feb-26 – 23-Feb-26			
Temperature: 21 °C	Relative Humidity: 54 %	Air Pressure: 1012 hPa	Power: 4.5 VDC
Remarks:			

Table 7.1.5 Restricted bands according to FCC 15, Section 205

MHz	MHz	MHz	MHz	MHz	GHz
0.09 - 0.11	8.37625 - 8.38675	73 - 74.6	399.9 - 410	2690 - 2900	10.6 - 12.7
0.495 - 0.505	8.41425 - 8.41475	74.8 - 75.2	608 - 614	3260 - 3267	13.25 - 13.4
2.1735 - 2.1905	12.290 - 12.293	108 - 121.94	960 - 1240	3332 - 3339	14.47 - 14.5
4.125 - 4.128	12.51975 - 12.52025	123 - 138	1300 - 1427	3345.8 - 3358	15.35 - 16.2
4.17725 - 4.17775	12.57675 - 12.57725	149.9 - 150.05	1435 - 1626.5	3600 - 4400	17.7 - 21.4
4.20725 - 4.20775	13.36 - 13.41	156.52475 - 156.52525	1645.5 - 1646.5	4500 - 5150	22.01 - 23.12
6.215 - 6.218	16.420 - 16.423	156.7 - 156.9	1660 - 1710	5350 - 5460	23.6 - 24
6.26775 - 6.26825	16.69475 - 16.69525	162.0125 - 167.17	1718.8 - 1722.2	7250 - 7750	31.2 - 31.8
6.31175 - 6.31225	16.80425 - 16.80475	167.72 - 173.2	2200 - 2300	8025 - 8500	36.43 - 36.5
8.291 - 8.294	25.5 - 25.67	240 - 285	2310 - 2390	9000 - 9200	Above 38.6
8.362 - 8.366	37.5 - 38.25	322 - 335.4	2483.5 - 2500	9300 - 9500	

Table 7.1.6 Restricted bands according to RSS-Gen, Table 3

MHz	MHz	MHz	MHz	MHz	GHz
0.09 - 0.11	8.291 - 8.294	16.80425 - 16.80475	399.9 - 410	3260 - 3267	10.6 - 12.7
2.1735 - 2.190	8.362 - 8.366	25.5 - 25.67	608 - 614	3332 - 3339	13.25 - 13.4
3.020 - 3.026	8.37625 - 8.38675	37.5 - 38.25	960 - 1427	3345.8 - 3358	14.47 - 14.5
4.125 - 4.128	8.41425 - 8.41475	73 - 74.6	1435 - 1626.5	3500 - 4400	15.35 - 16.2
4.17725 - 4.17775	12.290 - 12.293	74.8 - 75.2	1645.5 - 1646.5	4500 - 5150	17.7 - 21.4
4.20725 - 4.20775	12.51975 - 12.52025	108 - 138	1660 - 1710	5350 - 5460	22.01 - 23.12
5.677 - 5.683	12.57675 - 12.57725	156.52475 - 156.52525	1718.8 - 1722.2	7250 - 7750	23.6 - 24.0
6.215 - 6.218	13.36 - 13.41	156.7 - 156.9	2200 - 2300	8025 - 8500	31.2 - 31.8
6.26775 - 6.26825	16.42 - 16.423	240 - 285	2310 - 2390	9000 - 9200	36.43 - 36.5
6.31175 - 6.31225	16.69475 - 16.69525	322 - 335.4	2655 - 2900	9300 - 9500	Above 38.6



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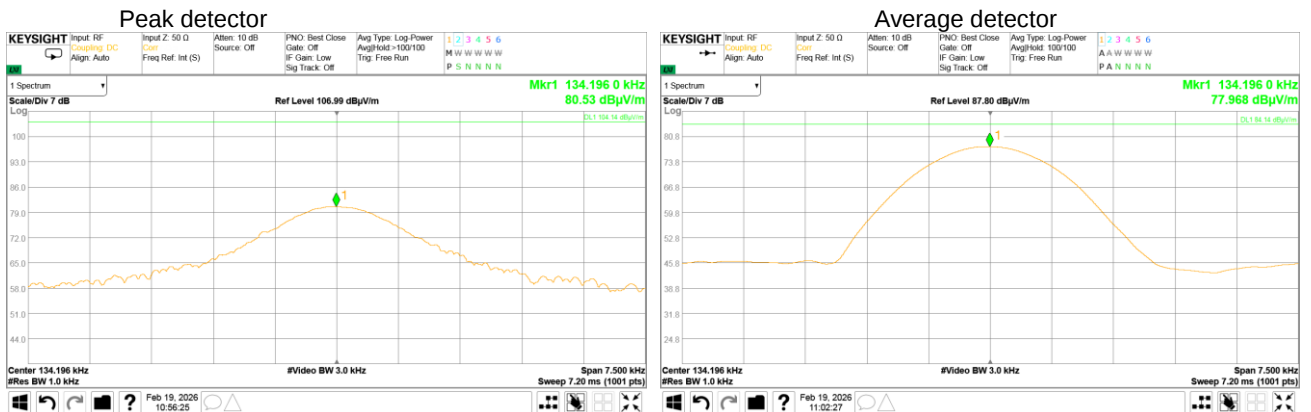
Report ID: AGRRAD_FCC.173034.docx
Date of Issue: 17-May-26

Test specification:		Section 15.209 / RSS-Gen, Section 6.5, 6.6 Field strength of emissions	
Test procedure:		ANSI C63.10, Section 6.4, 6.5	
Test mode:		Verdict: PASS	
Date(s):			
10-Feb-26 – 23-Feb-26			
Temperature: 21 °C	Relative Humidity: 54 %	Air Pressure: 1012 hPa	Power: 4.5 VDC
Remarks:			

Plot 7.1.1 Radiated emission measurements at the fundamental frequency

TEST SITE: OATS
TEST DISTANCE: 10 m
ANTENNA POLARIZATION: Vertical
EUT POSITION: Typical

With tag



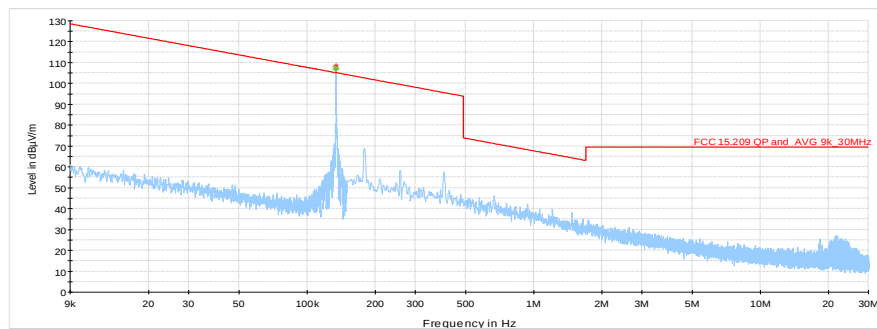


Test specification:		Section 15.209 / RSS-Gen, Section 6.5, 6.6 Field strength of emissions	
Test procedure:		ANSI C63.10, Section 6.4, 6.5	
Test mode:		Verdict: PASS	
Date(s):			
10-Feb-26 – 23-Feb-26			
Temperature: 21 °C	Relative Humidity: 54 %	Air Pressure: 1012 hPa	Power: 4.5 VDC
Remarks:			

Plot 7.1.2 Radiated emission measurements from 9 kHz to 30 MHz

TEST SITE: Semi Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical
EUT POSITION: Typical

With tag



Note: The fundamental frequency was measured at 10m



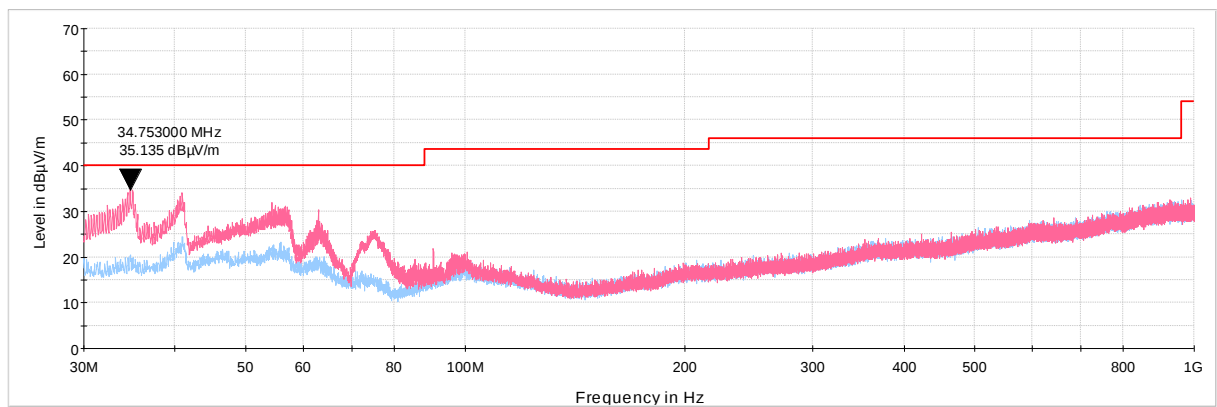
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Report ID: AGRRAD_FCC.173034.docx
Date of Issue: 17-May-26

Test specification: Section 15.209 / RSS-Gen, Section 6.5, 6.6 Field strength of emissions			
Test procedure: ANSI C63.10, Section 6.4, 6.5			
Test mode: Compliance		Verdict: PASS	
Date(s): 10-Feb-26 – 23-Feb-26			
Temperature: 21 °C	Relative Humidity: 54 %	Air Pressure: 1012 hPa	Power: 4.5 VDC
Remarks:			

Plot 7.1.3 Radiated emission measurements from 30 to 1000 MHz

TEST SITE: Semi anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical & Horizontal
EUT POSITION: Typical





Test specification:		Section 15.215 / RSS-Gen, Section 6.7, Occupied bandwidth	
Test procedure:		ANSI C63.10, Section 6.9.2	
Test mode:		Verdict: PASS	
Date(s):			
10-Feb-26			
Temperature: 21 °C	Relative Humidity: 54 %	Air Pressure: 1012 hPa	Power: 4.5 VDC
Remarks:			

7.2 Occupied bandwidth test

7.2.1 General

This test was performed to measure transmitter occupied bandwidth. Specification test limits are given in Table 7.2.1. The test results are provided in Table 7.2.2 and associated plots.

Table 7.2.1 Occupied bandwidth limits RSS-210

Assigned frequency, kHz	Modulation envelope reference points, %	Maximum allowed bandwidth, of the carrier frequency
134.196	99	NA

7.2.2 Test procedure

7.2.2.1 The EUT was set up as shown in Figure 7.2.1, energized and its proper operation was checked.

7.2.2.2 The EUT was set to transmit modulated carrier.

7.2.2.3 The transmitter occupied bandwidth was measured with spectrum analyzer as frequency delta between reference points on modulation envelope and provided in Table 7.2.2 and associated plot.

Figure 7.2.1 Occupied bandwidth test setup





Test specification:		Section 15.215 / RSS-Gen, Section 6.7, Occupied bandwidth	
Test procedure:		ANSI C63.10, Section 6.9.2	
Test mode:		Verdict: PASS	
Date(s):			
10-Feb-26			
Temperature: 21 °C	Relative Humidity: 54 %	Air Pressure: 1012 hPa	Power: 4.5 VDC
Remarks:			

Table 7.2.2 Occupied bandwidth test results

DETECTOR USED: Peak hold
 RESOLUTION BANDWIDTH: 100 Hz
 VIDEO BANDWIDTH: 1 kHz
 MODULATION ENVELOPE REFERENCE POINTS: 99 %
 MODULATION: ASK / FSK

Carrier frequency, kHz	Occupied bandwidth, kHz*	Limit		Margin, kHz	Verdict
		% of the carrier frequency	kHz		
134.196	1.8946	NA	NA	NA	Pass

* - Occupied bandwidth = Right cross point frequency - Left cross point frequency

Reference numbers of test equipment used

HL 3521	HL 5376	HL 5638	HL 6105					
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Full description is given in Appendix A.

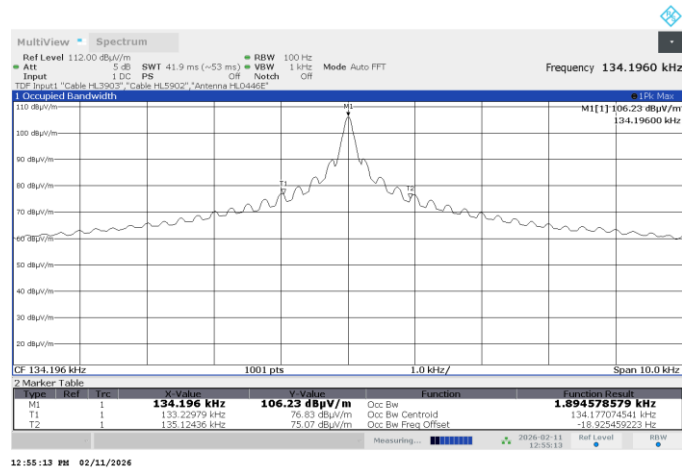


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Test specification:		Section 15.215 / RSS-Gen, Section 6.7, Occupied bandwidth	
Test procedure:		ANSI C63.10, Section 6.9.2	
Test mode:		Verdict: PASS	
Date(s):			
10-Feb-26			
Temperature: 21 °C	Relative Humidity: 54 %	Air Pressure: 1012 hPa	Power: 4.5 VDC
Remarks:			

Plot 7.2.1 99% occupied bandwidth test result

With tag





Test specification: Section 15.207(a) / RSS-Gen, Section 7.2, Conducted emission			
Test procedure: ANSI C63.10, Section 6.2			
Test mode: Compliance		Verdict: PASS	
Date(s): 10-Feb-26			
Temperature: 21 °C	Relative Humidity: 54 %	Air Pressure: 1012 hPa	Power: 4.5 VDC
Remarks:			

7.3 Conducted emissions

7.3.1 General

This test was performed to measure the common mode conducted emissions at the EUT power port. The specification test limits are given in Table 7.3.1.

Table 7.3.1 Limits for conducted emissions

Frequency, MHz	Class B limit, dB(μ V)	
	QP	AVRG
0.15 - 0.5	66 - 56*	56 - 46*
0.5 - 5.0	56	46
5.0 - 30	60	50

* - The limit decreases linearly with the logarithm of frequency.

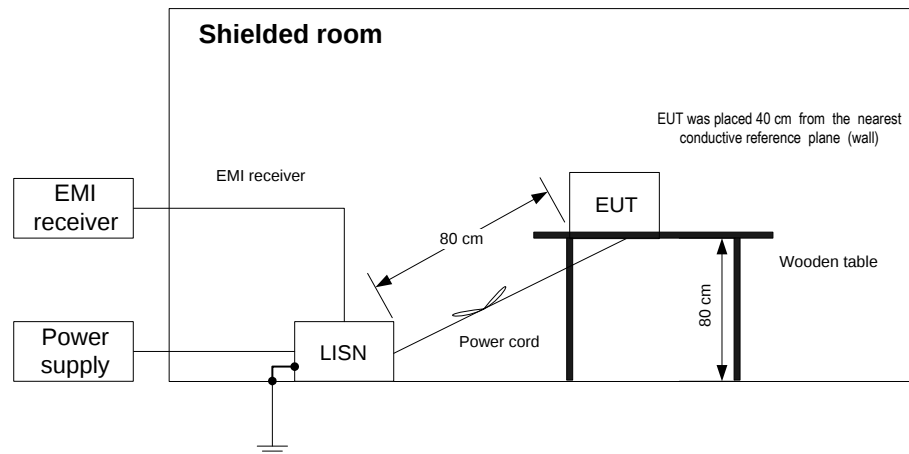
7.3.2 Test procedure

- 7.3.2.1** The EUT was set up as shown in Figure 7.3.1 and the associated photographs, energized and the EUT performance was checked.
- 7.3.2.2** The measurements were performed at the EUT power terminals with the LISN connected to the EMI receiver in the frequency range referred to in Table 7.3.2. The unused coaxial connector of the LISN was terminated with 50 Ohm.
- 7.3.2.3** The position of the EUT cables was varied to find the highest emission.
- 7.3.2.4** The worst test results with respect to the limits were recorded in Table 7.3.2 and shown in the associated plots.



Test specification: Section 15.207(a) / RSS-Gen, Section 7.2, Conducted emission			
Test procedure: ANSI C63.10, Section 6.2			
Test mode: Compliance		Verdict: PASS	
Date(s): 10-Feb-26			
Temperature: 21 °C	Relative Humidity: 54 %	Air Pressure: 1012 hPa	Power: 4.5 VDC
Remarks:			

Figure 7.3.1 Setup for conducted emission measurements, table-top EUT





Test specification: Section 15.207(a) / RSS-Gen, Section 7.2, Conducted emission			
Test procedure: ANSI C63.10, Section 6.2			
Test mode: Compliance		Verdict: PASS	
Date(s): 10-Feb-26			
Temperature: 21 °C	Relative Humidity: 54 %	Air Pressure: 1012 hPa	Power: 4.5 VDC
Remarks:			

Table 7.3.2 Conducted emission test results

LINE: DC
 EUT SET UP: TABLE-TOP
 TEST SITE: SHIELDED ROOM
 DETECTORS USED: QUASI-PEAK / AVERAGE
 FREQUENCY RANGE: 150 kHz - 30 MHz
 RESOLUTION BANDWIDTH: 9 kHz

Frequency, MHz	Quasi-peak			Average			Line ID	Verdict
	Measured emission, dB(μV)	Limit, dB(μV)	Margin, dB*	Measured emission, dB(μV)	Limit, dB(μV)	Margin, dB*		
0.150	44.81	66.00	-21.19	28.63	56.00	-27.37	L1	Pass
0.164	44.46	65.24	-20.78	26.00	55.24	-29.24		
25.90	33.96	60.00	-26.04	30.57	50.00	-19.43		
26.97	35.70	60.00	-24.30	32.58	50.00	-17.42		
27.51	36.94	60.00	-23.06	33.61	50.00	-16.39		
29.66	41.43	60.00	-18.57	38.35	50.00	-11.65		
0.152	45.29	65.89	-20.60	28.83	55.89	-27.06	L2	Pass
0.166	43.37	65.14	-21.77	24.30	55.14	-30.84		
26.974	35.80	60.00	-24.20	32.31	50.00	-17.69		
27.512	36.83	60.00	-23.17	33.32	50.00	-16.68		
28.853	39.48	60.00	-20.52	36.34	50.00	-13.66		
29.927	41.90	60.00	-18.10	38.87	50.00	-11.13		

*- Margin = Measured emission - specification limit.

Reference numbers of test equipment used

HL 787	HL 4528	HL 5606	HL 2888	HL 1501	HL 5708	HL 5476	
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Full description is given in Appendix A.

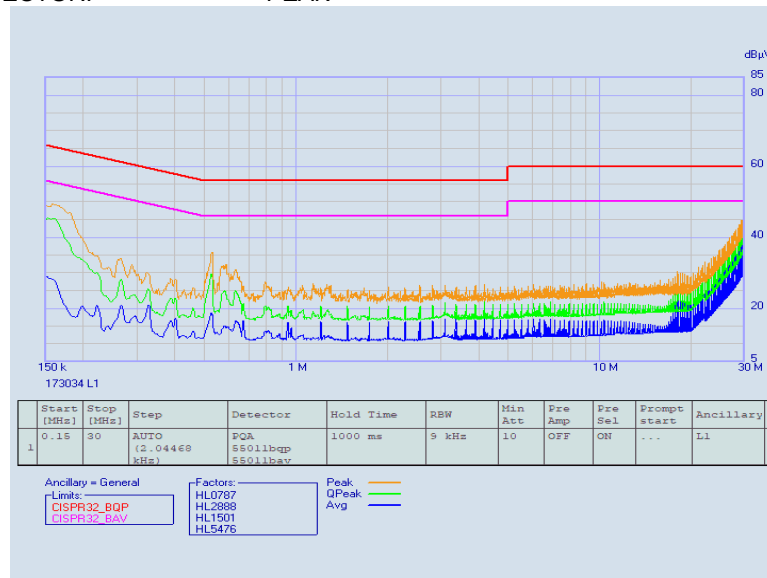


HERMON LABORATORIES

Test specification: Section 15.207(a) / RSS-Gen, Section 7.2, Conducted emission			
Test procedure: ANSI C63.10, Section 6.2			
Test mode: Compliance		Verdict: PASS	
Date(s): 10-Feb-26			
Temperature: 21 °C	Relative Humidity: 54 %	Air Pressure: 1012 hPa	Power: 4.5 VDC
Remarks:			

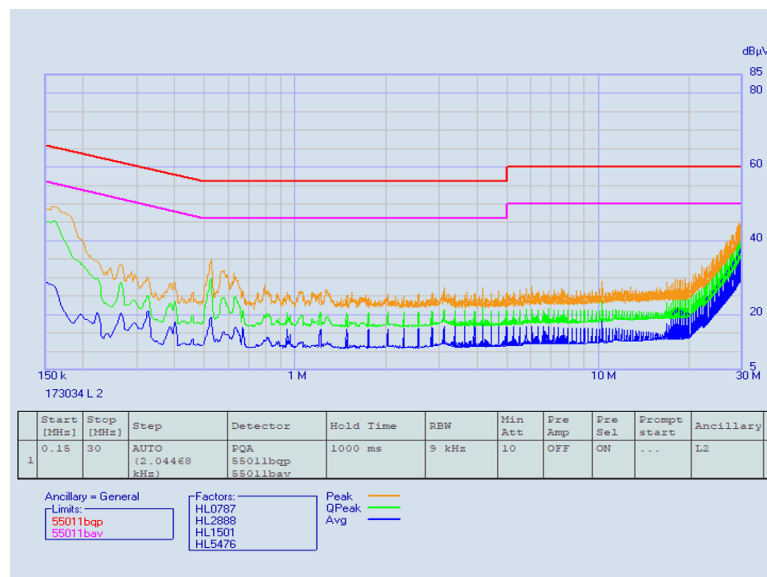
Plot 7.3.1 Conducted emission measurements

LINE: L1
LIMIT: QUASI-PEAK, AVERAGE
DETECTOR: PEAK



Plot 7.3.2 Conducted emission measurements

LINE: L2
LIMIT: QUASI-PEAK, AVERAGE
DETECTOR: PEAK





Test specification: Section 15.203 / RSS Gen Section 6.8, Antenna requirements			
Test procedure: Visual inspection			
Test mode: Compliance		Verdict: PASS	
Date(s): 10-Feb-26			
Temperature: 21 °C	Relative Humidity: 54 %	Air Pressure: 1012 hPa	Power: 4.5 VDC
Remarks:			

7.4 Antenna requirements

The EUT was verified for compliance with antenna requirements. A transmitter shall be designed to ensure that no antenna other than that furnished by the responsible party will be used with the device. It may be either permanently attached or employs a unique antenna connector for every antenna proposed for use with the EUT. This requirement does not apply to professionally installed transmitters.

The rationale for compliance with the above requirements was either visual inspection results or supplier declaration. The summary of results is provided in Table 7.4.1.

Table 7.4.1 Antenna requirements

Requirement	Rationale	Verdict
The transmitter antenna is permanently attached	Supplier declaration	Comply
The transmitter employs a unique antenna connector	NA	
The transmitter requires professional installation	NA	

8 APPENDIX A Test equipment and ancillaries used for tests

HL No	Description	Manufacturer	Model	Ser. No.	Last Cal./ Check	Due Cal./ Check
0446	Antenna, Loop, Active, 10 (9) kHz - 30 MHz	EMCO	6502	2857	05-Feb-26	05-Feb-27
3521	Multimeter	Fluke	115	94771103	30-Oct-25	30-Oct-26
3903	Microwave Cable Assembly, 40.0 GHz, 1.5 m, SMA/SMA	Huber-Suhner	SUCOFL EX 102A	1226/2A	10-Jun-25	10-Jun-26
5288	Trilog Antenna, 25 MHz - 8 GHz, 100W	Frankonia	ALX-8000E	00809	08-Apr-25	08-Apr-27
5376	EXA Signal Analyzer, 10 Hz - 32 GHz	Keysight Technologies	N9010B	MY574704 04	17-Mar-25	17-Mar-26
5410	RF cable, 40 GHz, SMA-SMA, 5.5 m	Huber-Suhner	SF102EA/11SK/11SK/5500MM	503974/EA	01-Sep-25	01-Sep-26
5638	Cable, 50 Ohm, DC to 18 GHz, 1.8 m, SMA/SMA	Mini Circuits	CBL-6FT-SMSM+	NA	10-Nov-25	10-Nov-26
5664	Cable, 1. SF102EA/11SK(x2)/5.5M, 40 GHz	Huber-Suhner	SF102EA	505603/2EA	10-Nov-25	10-Nov-26
5902	RF cable, 18 GHz, 6.0m, N-type	Huber-Suhner	SF126EA/11N/11N/6000	NA	24-Apr-25	24-Apr-26
6105	Field Probe Set, 5 un	NA	NA	NA	05-Sep-25	05-Sep-26
7585	EMI Test Receiver, 1 Hz to 44 GHz	Rohde & Schwarz	ESW44	103130	30-Sep-25	30-Sep-26

9 APPENDIX B Test equipment correction factors

HL 0446: Active Loop Antenna
EMCO, model: 6502, s/n 2857

Frequency,	Measured antenna factor, dBS/m	Measurement uncertainty, dB
10	-33.4	±1.0
20	-37.8	±1.0
50	-40.5	±1.0
75	-41.0	±1.0
100	-41.2	±1.0
150	-41.2	±1.0
250	-41.1	±1.0
500	-41.2	±1.0
750	-41.3	±1.0
1000	-41.3	±1.0

Frequency,	Measured antenna factor, dBS/m	Measurement uncertainty, dB
2000	-41.4	±1.0
3000	-41.4	±1.0
4000	-41.5	±1.0
5000	-41.5	±1.0
10000	-41.7	±1.0
15000	-42.1	±1.0
20000	-42.7	±1.0
25000	-44.2	±1.0
30000	-45.8	±1.0

The antenna factor shall be added to receiver reading in dB μ V to obtain field strength in dB μ A/m.

HL 5288: Trilog Antenna
Frankonia, model: ALX-8000E, s/n: 00809
30-1000 MHz

Frequency, MHz	Antenna factor, dB/m
30	14.96
35	15.33
40	16.37
45	17.56
50	17.95
60	16.87
70	13.22
80	10.56
90	13.61
100	15.46
120	14.03
140	12.23

Frequency, MHz	Antenna factor, dB/m
160	12.67
180	13.34
200	15.40
250	16.42
300	17.28
400	19.98
500	21.11
600	22.90
700	24.13
800	25.25
900	26.35
1000	27.18

The antenna factor shall be added to receiver reading in dB μ V to obtain field strength in dB μ V/m.

above 1000 MHz

Frequency, MHz	Antenna factor, dB/m
1000	26.9
1100	28.1
1200	28.4
1300	29.6
1400	29.1
1500	30.4
1600	30.7
1700	31.5
1800	32.3
1900	32.6
2000	32.5
2100	32.9
2200	33.5
2300	33.2
2400	33.7
2500	34.6
2600	34.7
2700	34.6
2800	35.0
2900	35.5
3000	36.2
3100	36.8
3200	36.8
3300	37.0
3400	37.5
3500	38.2

Frequency, MHz	Antenna factor, dB/m
3600	38.9
3700	39.4
3800	39.4
3900	39.6
4000	39.7
4100	39.8
4200	40.5
4300	40.9
4400	41.1
4500	41.4
4600	41.3
4700	41.6
4800	41.9
4900	42.3
5000	42.7
5100	43.0
5200	42.9
5300	43.5
5400	43.6
5500	44.3
5600	44.7
5700	45.0
5800	45.0
5900	45.3
6000	45.9

The antenna factor shall be added to receiver reading in dB μ V to obtain field strength in dB μ V/m.

10 APPENDIX C Measurement uncertainties

Expanded uncertainty at 95% confidence in Hermon Labs EMC measurements

Test description	Expanded uncertainty
Conducted emissions with LISN	9 kHz to 150 kHz: ± 3.9 dB 150 kHz to 30 MHz: ± 3.8 dB
Radiated emissions at 10 m measuring distance Horizontal polarization Vertical polarization	Biconilog antenna: ± 5.0 dB Biconical antenna: ± 5.0 dB Log periodic antenna: ± 5.1 dB Double ridged horn antenna: ± 5.3 dB Biconilog antenna: ± 5.5 dB Biconical antenna: ± 5.5 dB Log periodic antenna: ± 5.6 dB Double ridged horn antenna: ± 5.8 dB
Radiated emissions at 3 m measuring distance Horizontal polarization Vertical polarization	Biconilog antenna: ± 5.3 dB Biconical antenna: ± 5.0 dB Log periodic antenna: ± 5.3 dB Double ridged horn antenna: ± 5.3 dB Biconilog antenna: ± 6.0 dB Biconical antenna: ± 5.7 dB Log periodic antenna: ± 6.0 dB Double ridged horn antenna: ± 6.0 dB
Conducted emissions at RF antenna connector	9 kHz to 2.9 GHz: ± 2.6 dB 2.9 GHz to 6.46 GHz: ± 3.5 dB 6.46 GHz to 13.2 GHz: ± 4.3 dB 13.2 GHz to 22.0 GHz: ± 5.0 dB 22.0 GHz to 26.8 GHz: ± 5.5 dB 26.8 GHz to 40.0 GHz: ± 4.8 dB
Duty cycle, timing (Tx ON / OFF) and average factor measurements	± 1.0 %
Occupied bandwidth	± 8.0 %

Hermon Laboratories is accredited by A2LA for calibration according to present requirements of ISO/IEC 17025 and NCSL Z540-1. The accreditation is granted to perform calibration of parameters that are listed in the Scope of Hermon Laboratories Accreditation.

Hermon Laboratories calibrates its reference and transfer standards by calibration laboratories accredited to ISO/IEC 17025 by a mutually recognized Accreditation Body or by a recognized national metrology institute. All reference and transfer standards used in the calibration system are traceable to national or international standards.

In-house calibration of all test and measurement equipment is performed on a regular basis according to Hermon Laboratories calibration procedures, manufacturer calibration/verification procedures or procedures defined in the relevant standards. The Hermon Laboratories test and measurement equipment is calibrated within the tolerances specified by the manufacturers and/or by the relevant standards.

11 APPENDIX D Test laboratory description

Tests were performed at Hermon Laboratories Ltd., which is a fully independent, private, EMC, Radio, Safety, Environmental and Telecommunication testing facility.

Hermon Laboratories is recognized and accredited by the Federal Communications Commission (USA) for relevant parts of Code of Federal Regulations 47 (CFR 47), Test Firm Registration Number is 927748, Designation Number is IL1001; Recognized by Innovation, Science and Economic Development Canada for wireless and terminal testing (ISED), ISED #2186A, CAB identifier is IL1001; Certified by VCCI, Japan (the registration numbers for OATS are R-10808 for RE measurements below 1 GHz, G-20112 for RE measurements above 1 GHz, R-11082 for anechoic chamber for RE measurements below 1 GHz, G-10869 for RE measurements above 1 GHz, C-10845 for conducted emissions site and T-11606 for conducted emissions at telecommunication ports).

The laboratory is accredited by American Association for Laboratory Accreditation (USA) according to ISO/IEC 17025 for electromagnetic compatibility, product safety, telecommunications testing, environmental simulation and calibration (for exact scope please refer to Certificate No. 839.01, 839.03 and 839.04).

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Person for contact: Mr. Michael Nikishin, EMC&Radio group manager

12 APPENDIX E Specification references

47CFR part 15: 2024	Radio Frequency Devices.
RSS-210 Issue 11: 2025	Low Power Licence- Exempt Radiocommunication Devices
ANSI C63.10: 2013	American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices
RSS-Gen_issue 5_with_amend1_2_2021	General Requirements for Compliance of Radio Apparatus

13 APPENDIX F Abbreviations and acronyms

AC	alternating current
A/m	ampere per meter
AM	amplitude modulation
AVRG	average (detector)
cm	centimeter
dB	decibel
dBm	decibel referred to one milliwatt
dB(μ V)	decibel referred to one microvolt
dB(μ V/m)	decibel referred to one microvolt per meter
dB(μ A)	decibel referred to one microampere
DC	direct current
EUT	equipment under test
F	frequency
GHz	gigahertz
GND	ground
H	height
HL	Hermon laboratories
Hz	hertz
k	kilo
kHz	kilohertz
LO	local oscillator
m	meter
MHz	megahertz
min	minute
mm	millimeter
ms	millisecond
μ s	microsecond
NA	not applicable
OATS	open area test site
Ω	Ohm
PS	power supply
QP	quasi-peak
RE	radiated emission
RF	radio frequency
rms	root mean square
Rx	receive
s	second
T	temperature
Tx	transmit
V	volt

END OF DOCUMENT