

TEST REPORT

ACCORDING TO: FCC CFR 47 Part 95, subpart M

FOR:

Mobileye Vision Technologies Ltd

Mobileye Imaging Radar 1.1

Model: MIR 1.1

FCC ID: 2BT4S-BSRC

IC: 35539-BSRC

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Table of contents

1	Applicant information.....	3
2	Equipment under test attributes	3
3	Manufacturer information	3
4	Test details.....	3
5	Tests summary.....	4
6	EUT description.....	5
6.1	General information.....	5
6.2	Test configuration.....	5
6.3	Transmitter characteristics	6
7	Transmitter tests according 47CFR part 95 requirements.....	7
7.1	RF output power.....	7
7.2	Occupied bandwidth.....	12
7.3	Frequency stability	15
7.4	Unwanted radiated emissions	19
8	APPENDIX A Test equipment and ancillaries used for tests.....	40
9	APPENDIX B Test equipment correction factors.....	42
10	APPENDIX C Measurement uncertainties	44
11	APPENDIX D Test laboratory description	45
12	APPENDIX E Specification references.....	45
13	APPENDIX F Abbreviations and acronyms.....	46

1 Applicant information

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Contact name: Mr. Tomer Oren

2 Equipment under test attributes

Product name: Mobileye Imaging Radar 1.1
Product type: Automotive Imaging Radar
Model(s): MIR 1.1
Serial number: 04023
Hardware version: C3
Software release: 4.10
Receipt date: 26-Jan-26

3 Manufacturer information

Manufacturer name: Mobileye Vision Technologies Ltd.
Address: Shlomo Momo Halevi 1 Jerusalem, 9777015, Israel
Telephone: +972 (0)2 541 7333
E-Mail: Tomer.Oren@mobileye.com
Contact name: Mr. Tomer Oren

4 Test details

Project ID: 172119
Location: Hermon Laboratories Ltd. 66 HaTachana str., P.O. Box 23, Binyamina 3055001, Israel
Test started: 05-Feb-26
Test completed: 15-Mar-26
Test specification(s): FCC CFR 47 Part 95, subpart M

5 Tests summary

Test	Status
Transmitter tests	
FCC Section 2.1046 and 95.3367 (a) (b), RF Output Power	Pass
FCC Section 2.1049, Occupied bandwidth	Pass
FCC Section 2.1053 and 95.3379 (a) (1) and 95.3379 (a) (2), Field Strength of Spurious Radiation	Pass
FCC Section 2.1055 and 95.3379 (b), Frequency Stability	Pass

Testing was completed against all 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:	Mr. S. Sugatov, test engineer, EMC & Radio	05-Feb-26 – 15-Mar-26	
Reviewed by:	Mrs. S. Peysahov Sheynin, certification engineer, EMC & Radio	12-May-26	
Approved by:	Mr. M. Nikishin, group leader, EMC & Radio	28-Jun-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 a side mounted radar for automotive applications. The EUT is 4D Imaging Radar sensor technology that delivers improved comfort, safety and autonomous driving capabilities.

The EUT is intended for use in the 76 GHz to 77 GHz band, utilizing 16TX × 24RX antenna array (55.9x77.1 mm) and delivering +28 dBm total EIRP.

The EUT was powered from 12 VDC.

Device was tested in MRR (Medium Range Radar) mode.

In MRR mode bandwidth is 250 MHz.

The EUT is intended for installation in a vehicle (e.g., behind the bumper) and uses an integral PCB antenna.

During normal operation, a minimum separation distance of 20 cm from all persons is maintained.

6.2 Test configuration



6.3 Transmitter characteristics

Type of equipment				
☒	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		
☐	fixed	Always at a distance more than 2 m from all people		
☒	mobile	Always at a distance more than 20 cm from all people		
☐	portable	May operate at a distance closer than 20 cm to human body		
Assigned frequency range		76.0 GHz – 81.0 GHz		
Operating frequency range		76000 - 77000 MHz		
Test frequencies		76.1288 GHz, 76.8713 GHz		
Maximum rated output power		Peak EIRP /1 MHz	17.06 dBm	
		AVR EIRP	15.80 dBm	
Is transmitter output power variable?	☒	No		
	☐	Yes	continuous variable	
			stepped variable with stepsize	dB
			minimum RF power	dBm
			maximum RF power	
Antenna connection				
unique coupling	standard connector	☒ Integral antenna (PCB patch array)	☐ with temporary RF connector ☒ without temporary RF connector	
Antenna/s technical characteristics				
Type	Manufacturer	Model number	Gain	
PCB printed antenna	Mobileye	N/A	9.2dBi	
Transmitter aggregate data rate/s		N/A		
Type of modulation		CTDM		
Modulating test signal (baseband)		FMCW		
Transmitter power source				
☒	DC	Nominal rated voltage	12 V	
☐	AC mains	Voltage range		
☐		Nominal rated voltage		
☐		Frequency		
Common power source for transmitter and receiver		☒ yes	☐ no	



Test specification: Section 2.1046 and 95.3367 (a) (b), RF Output Power			
Test procedure: ANSI C63.10, Section 9.10			
Test mode: Compliance		Verdict: PASS	
Date(s): 18-Feb-26			
Temperature: 26 °C	Relative Humidity: 72 %	Air Pressure: 1010 hPa	Power: 12 VDC
Remarks:			

7 Transmitter tests according 47CFR part 95 requirements

7.1 RF output power

7.1.1 General

This test was performed to measure transmitter output power. Specification test limits are given in Table 7.1.1.

Table 7.1.1 RF output power limits

Assigned frequency range, MHz	EIRP peak power spectral density (maximum in any 1MHz) dBm	EIRP power averaging integrated over 99%OBW with RBW=1 MHz dBm
76000.0 – 81000.0	55.0	50.0

7.1.2 Test procedure for field strength measurements

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 field strength of the EUT carrier frequency was measured with antenna connected to spectrum analyzer/ EMI receiver. To find maximum radiation the turntable was rotated 360°, the measuring antenna height was swept throughout the range, specified in Table 7.1.2 and Table 7.1.3, in both vertical and horizontal polarizations.

7.1.2.3 The worst test results (the lowest margins) were recorded in Table 7.1.2 and Table 7.1.3 and shown in the associated plots.

7.1.3 Test procedure for substitution EIRP measurements

7.1.3.1 The test equipment was set up as shown in Figure 7.1.1 and Figure 7.1.2 and energized.

7.1.3.2 RF signal generator was set to the EUT carrier frequency and the RF output level was preliminary adjusted to produce the same field strength as it was measured from the EUT.

7.1.3.3 The EIRP was calculated as a sum of signal generator output power in dBm and antenna gain in dBd reduced by cable loss in dB.

7.1.3.4 The above procedure was performed in both horizontal and vertical polarizations of the test antenna.

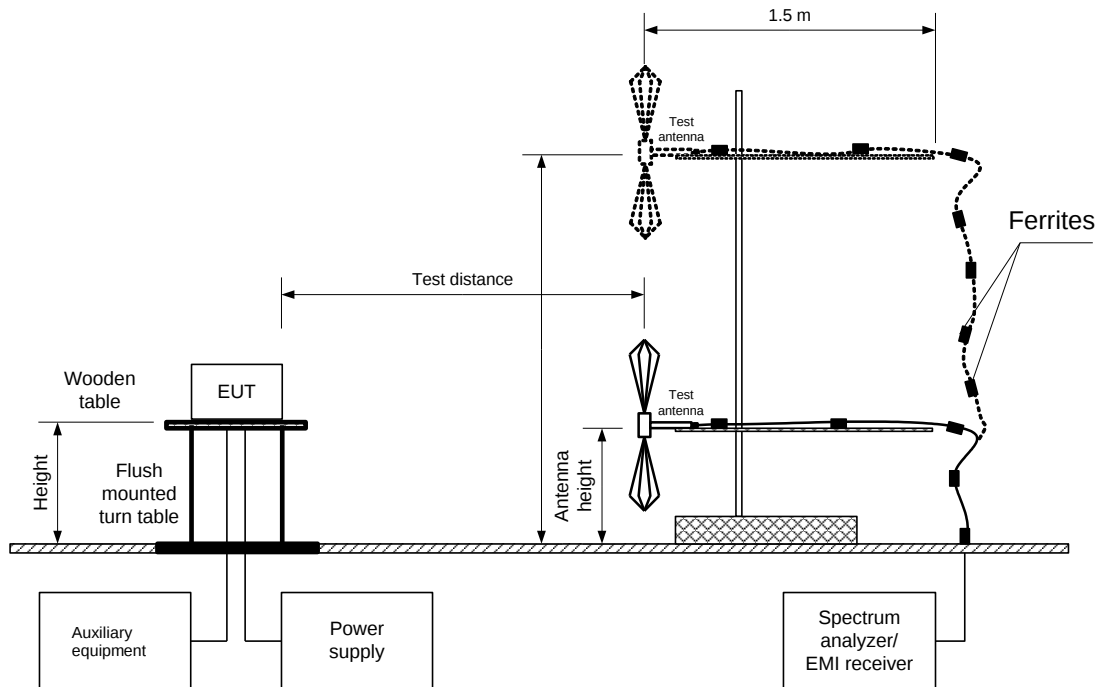
7.1.3.5 The worst test results (peak power in any 1MHz) were recorded in Table 7.1.2 and shown in the associated plots.

7.1.3.6 The worst test results (power averaging integrated over OBW with RBW=1 MHz) were recorded in Table 7.1.3 and shown in the associated plots.



Test specification:		Section 2.1046 and 95.3367 (a) (b), RF Output Power	
Test procedure:		ANSI C63.10, Section 9.10	
Test mode:		Verdict: PASS	
Date(s):			
18-Feb-26			
Temperature: 26 °C	Relative Humidity: 72 %	Air Pressure: 1010 hPa	Power: 12 VDC
Remarks:			

Figure 7.1.1 Setup for RF peak output power measurements

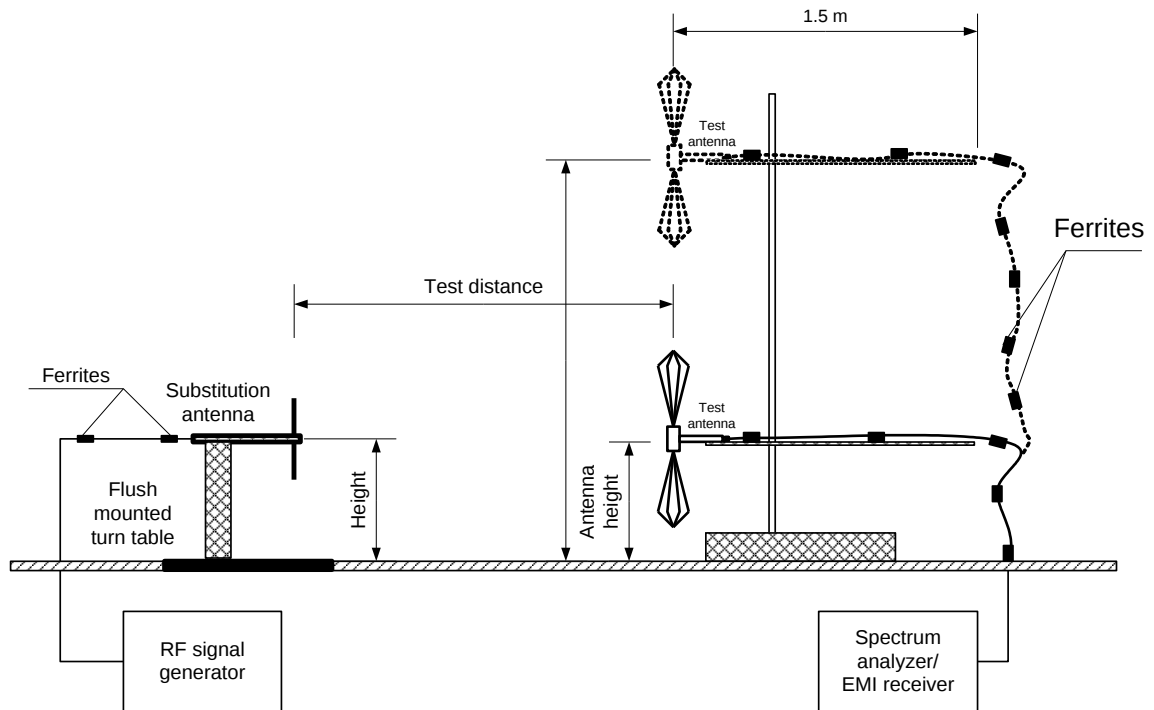




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Test specification: Section 2.1046 and 95.3367 (a) (b), RF Output Power			
Test procedure: ANSI C63.10, Section 9.10			
Test mode: Compliance		Verdict: PASS	
Date(s): 18-Feb-26			
Temperature: 26 °C	Relative Humidity: 72 %	Air Pressure: 1010 hPa	Power: 12 VDC
Remarks:			

Figure 7.1.2 Setup for substitution measurements





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Test specification: Section 2.1046 and 95.3367 (a) (b), RF Output Power			
Test procedure: ANSI C63.10, Section 9.10			
Test mode: Compliance		Verdict: PASS	
Date(s): 18-Feb-26			
Temperature: 26 °C	Relative Humidity: 72 %	Air Pressure: 1010 hPa	Power: 12 VDC
Remarks:			

Table 7.1.2 Peak EIRP test results

TEST DISTANCE: 3 m
 SUBSTITUTION ANTENNA HEIGHT: 1.5 m
 TEST ANTENNA HEIGHTS RANGE: 1.0 – 4.0 m
 DETECTOR USED: Peak

Frequency GHz	Peak Field strength /1 MHz, dBuV/m	RF generator output, dBm	Ant gain, dBi	Cable loss, dB	EIRP /1 MHz, dBm**	Limit, dBm	Margin, dB*	Verdict
LF	107.73	-11.74	24.0	N/A	16.91	55.0	-38.09	Pass
MF	107.84	-11.60	24.0	N/A	17.02	55.0	-37.98	Pass
HF	107.99	-11.48	24.0	N/A	17.17	55.0	-37.83	Pass

*- Margin = EIRP – specification limit.

**- The desensitization correction factor of 4.65 dB was applied to the measurement results.

$$\text{FMCW desensitization factor} = -20 * \log(\alpha)$$

where

$$\alpha = \frac{1}{\left(1 + \left[\left(\frac{2 \times \ln(2)}{\pi}\right)^2 \times \left(\frac{BW_{\text{Chirp}}}{T_{\text{Chirp}} \times RBW^2}\right)^2\right]\right)^{0.25}}$$

Table 7.1.3 Averaging EIRP test results

TEST DISTANCE: 3 m
 SUBSTITUTION ANTENNA HEIGHT: 1.5 m
 TEST ANTENNA HEIGHTS RANGE: 1.0 – 4.0 m
 DETECTOR USED: AVG

Frequency GHz	AVR Field strength dBuV/m*	RF generator output, dBm	Ant gain, dBi	Cable loss, dB	AVR EIRP, dBm	Limit, dBm	Margin, dB**	Verdict
LF	109.7	-7.69	24.0	N/A	16.31	50.0	-33.69	Pass
MF	109.60	-7.53	24.0	N/A	16.40	50.0	-33.60	Pass
HF	109.8	-7.57	24.0	N/A	16.43	50.0	-33.57	Pass

*-Channel Power Function was used to calculate the average power.

**- Margin = EIRP – specification limit.

Reference numbers of test equipment used

HL 3291	HL 4881	HL 5376	HL 5380	HL 5986	HL 7522	HL 5391	HL 0771
HL 5371	HL 4856	HL 5409	HL 3293				

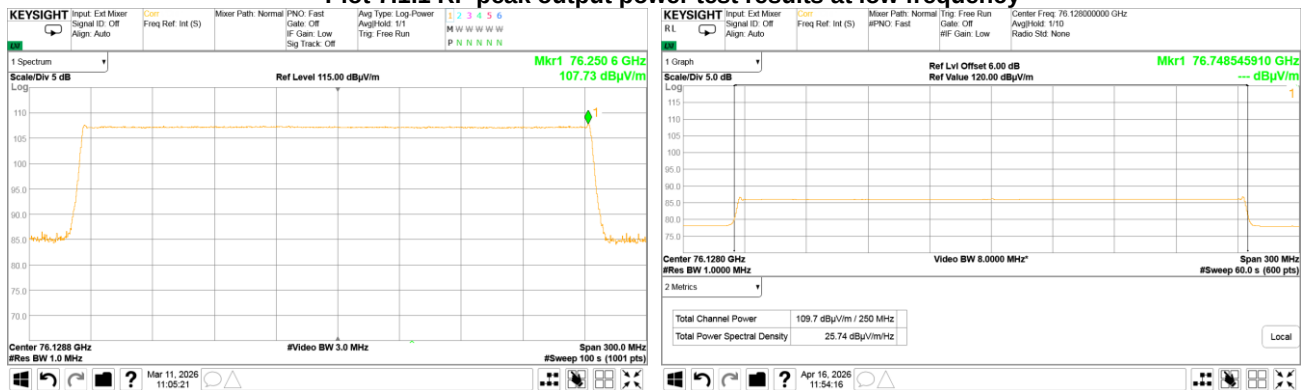
Full description is given in Appendix A.



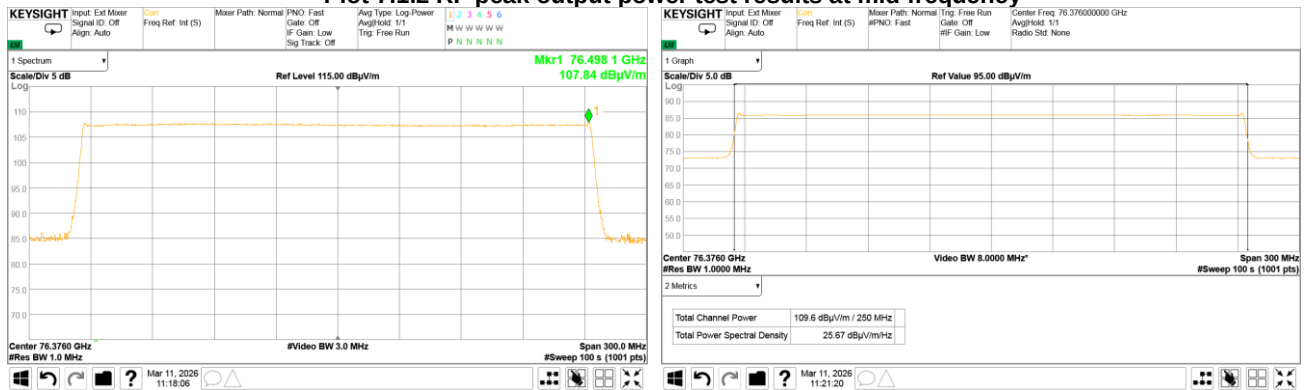
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Test specification: Section 2.1046 and 95.3367 (a) (b), RF Output Power			
Test procedure: ANSI C63.10, Section 9.10			
Test mode: Compliance		Verdict: PASS	
Date(s): 18-Feb-26			
Temperature: 26 °C	Relative Humidity: 72 %	Air Pressure: 1010 hPa	Power: 12 VDC
Remarks:			

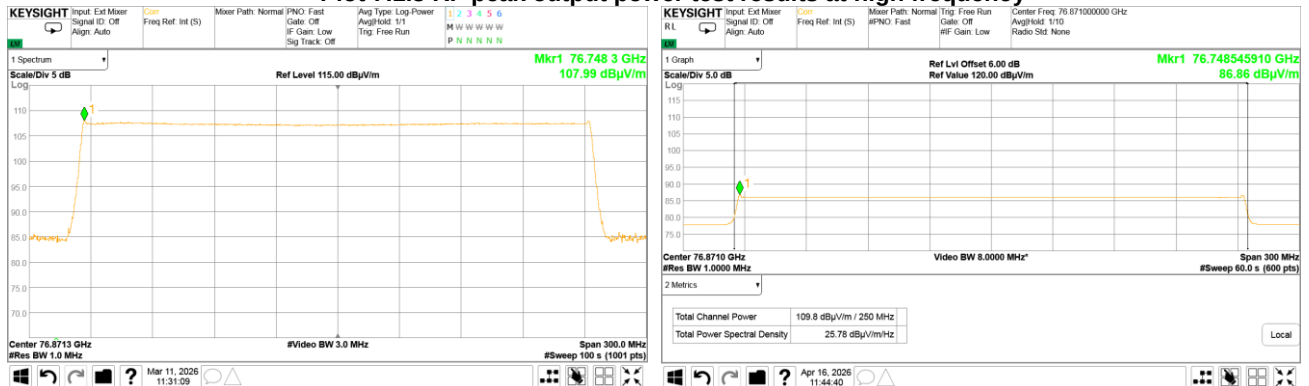
Plot 7.1.1 RF peak output power test results at low frequency



Plot 7.1.2 RF peak output power test results at mid frequency



Plot 7.1.3 RF peak output power test results at high frequency





Test specification: Section 2.1049, Occupied bandwidth			
Test procedure: ANSI C63.10, Section 9.3			
Test mode: Compliance		Verdict: PASS	
Date(s): 18-Feb-26			
Temperature: 26 °C	Relative Humidity: 72 %	Air Pressure: 1010 hPa	Power: 12 VDC
Remarks:			

7.2 Occupied bandwidth

7.2.1 General

This test was performed to measure 99% Occupied Channel Bandwidth of the EUT carrier frequency. Specification test limits are given in Table 7.2.1.

Table 7.2.1 Operating channel

Assigned frequency band, GHz	Modulation envelope reference points*	Limit, MHz
76.0 – 81.0	99% (26 dBc)	OBW shall be within the assigned frequency band

* - Modulation envelope reference points provided in terms of attenuation below the peak of modulated carrier.

7.2.2 Test procedure

7.2.2.1 The EUT was set up as shown in Figure 7.2.1, energized and the performance check was conducted.

7.2.2.2 The EUT was adjusted to produce maximum available for end user RF output power.

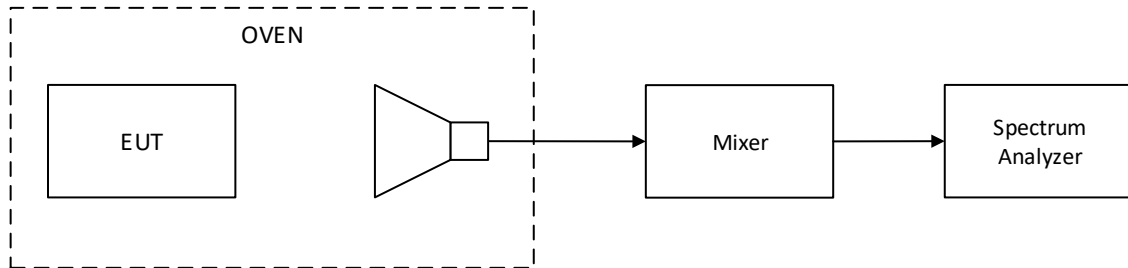
7.2.2.3 The occupied bandwidth was measured with spectrum analyzer (the 99% occupied bandwidth function of the spectrum analyzer was used).

7.2.2.4 The test results were recorded in Table 7.2.2 and shown in the associated plots.



Test specification:		Section 2.1049, Occupied bandwidth	
Test procedure:		ANSI C63.10, Section 9.3	
Test mode:		Verdict: PASS	
Date(s):			
18-Feb-26			
Temperature: 26 °C	Relative Humidity: 72 %	Air Pressure: 1010 hPa	Power: 12 VDC
Remarks:			

Figure 7.2.1 Setup for occupied bandwidth measurements





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Test specification: Section 2.1049, Occupied bandwidth			
Test procedure: ANSI C63.10, Section 9.3			
Test mode: Compliance		Verdict: PASS	
Date(s): 18-Feb-26			
Temperature: 26 °C	Relative Humidity: 72 %	Air Pressure: 1010 hPa	Power: 12 VDC
Remarks:			

Table 7.2.2 Occupied Channel Bandwidth test results

ASSIGNED FREQUENCY BAND: 76.0 – 81.0 GHz
DETECTOR USED: Peak
SWEEP MODE: Max hold
SWEEP TIME: Auto
RESOLUTION BANDWIDTH: ~1% OF SPAN
VIDEO BANDWIDTH: < 3* RESOLUTION BANDWIDTH

Carrier frequency, MHz	99% bandwidth, MHz	Assigned frequency range, MHz	Verdict
LF	246.87	76000 - 81000	Pass
MF	246.77	76000 - 81000	Pass
HF	246.85	76000 - 81000	Pass

Reference numbers of test equipment used

HL 5376	HL 5986	HL 3291	HL 5380	HL 7522	HL 5391		
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Full description is given in Appendix A.

Plot 7.2.1 Occupied bandwidth measurements in normal conditions





Test specification: Sections 2.1055 and 95.3379 (b), Frequency Stability			
Test procedure: ANSI C63.10, Section 9.14			
Test mode: Compliance		Verdict: PASS	
Date(s): 04-Mar-26			
Temperature: 26 °C	Relative Humidity: 72 %	Air Pressure: 1010 hPa	Power: 12 VDC
Remarks:			

7.3 Frequency stability

7.3.1 General

This test was performed to measure frequency stability of transmitter RF carrier. Specification test limits are given in Table 7.3.1.

Table 7.3.1 Frequency stability limits

Operational frequency band, GHz	Modulation envelope reference points*	Limit, MHz
76.0 - 77.0	99% (26 dBc)	OBW shall be within the frequency band specified

* - Modulation envelope reference points provided in terms of attenuation below the peak of modulated carrier.

7.3.2 Test procedure

7.3.2.1 The EUT was set up as shown in Figure 7.3.1, energized and the performance check was conducted.

7.3.2.2 The EUT was adjusted to produce maximum available for end user RF output power.

7.3.2.3 The occupied bandwidth was measured with spectrum analyzer (the 99% occupied bandwidth function of the spectrum analyzer was used).

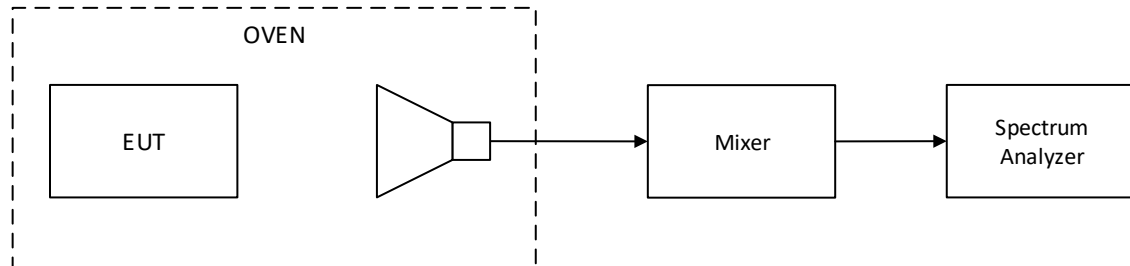
7.3.2.4 The occupied bandwidth was measured with spectrum analyzer (the 99% occupied bandwidth function of the spectrum analyzer was used) operate over the temperature range -20 to +50 degrees Celsius with an input voltage variation of 85% to 115% of rated input voltage.

7.3.2.5 The test results were recorded in Table 7.3.2 and Table 7.3.3 and Table 7.3.4 and shown in the associated plots.



Test specification:		Sections 2.1055 and 95.3379 (b), Frequency Stability	
Test procedure:		ANSI C63.10, Section 9.14	
Test mode:		Verdict: PASS	
Date(s):			
04-Mar-26			
Temperature: 26 °C	Relative Humidity: 72 %	Air Pressure: 1010 hPa	Power: 12 VDC
Remarks:			

Figure 7.3.1 Setup for Frequency stability measurements





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Test specification: Sections 2.1055 and 95.3379 (b), Frequency Stability			
Test procedure: ANSI C63.10, Section 9.14			
Test mode: Compliance		Verdict: PASS	
Date(s): 04-Mar-26			
Temperature: 26 °C	Relative Humidity: 72 %	Air Pressure: 1010 hPa	Power: 12 VDC
Remarks:			

Table 7.3.2 Frequency stability test results at LF

OPERATING FREQUENCY: 76.0 – 77.0 GHz
 DETECTOR USED: Peak
 SWEEP MODE: Max hold
 SWEEP TIME: Auto
 RESOLUTION BANDWIDTH: ~1% OF SPAN
 VIDEO BANDWIDTH: < 3* RESOLUTION BANDWIDTH
 TEMPERATURE STABILIZATION PERIOD: 20 min
 POWER DURING TEMPERATURE TRANSITION: Off

Frequency, GHz	Temp., °C	Voltage, V	OBW, MHz	F low, MHz	F high, MHz	Verdict
76.0 – 77.0	50	12.0	246.274	76.004789935	76.251063923	Pass
	40	12.0	246.431	76.004968953	76.251400246	Pass
	30	12.0	246.315	76.005287082	76.251601718	Pass
	20	8.0	246.329	76.005427040	76.251756477	Pass
	20	12.0	246.445	76.005585184	76.252029886	Pass
	20	18.0	246.329	76.005445997	76.251774534	Pass
	10	12.0	246.437	76.005368936	76.251805693	Pass
	0	12.0	246.545	76.005291874	76.251836851	Pass
	-10	12.0	246.312	76.006324823	76.252637316	Pass
	-20	12.0	246.353	76.006751632	76.253104316	Pass
	-30	12.0	246.483	76.007015946	76.253498644	Pass

Table 7.3.3 Frequency stability test results at MF

OPERATING FREQUENCY: 76.0 – 77.0 GHz
 DETECTOR USED: Peak
 SWEEP MODE: Max hold
 SWEEP TIME: Auto
 RESOLUTION BANDWIDTH: ~1% OF SPAN
 VIDEO BANDWIDTH: < 3* RESOLUTION BANDWIDTH
 TEMPERATURE STABILIZATION PERIOD: 20 min
 POWER DURING TEMPERATURE TRANSITION: Off

Frequency, GHz	Temp., °C	Voltage, V	OBW, MHz	F low, MHz	F high, MHz	Verdict
76.0 – 77.0	50	12.0	245.976	76.252509430	76.498485344	Pass
	40	12.0	246.007	76.252577084	76.498584332	Pass
	30	12.0	246.135	76.252693101	76.498828015	Pass
	20	8.0	246.156	76.252801326	76.498957260	Pass
	20	12.0	246.139	76.252979901	76.499118758	Pass
	20	18.0	246.167	76.252828190	76.498995447	Pass
	10	12.0	246.114	76.252970594	76.499084131	Pass
	0	12.0	246.060	76.253112998	76.499172815	Pass
	-10	12.0	246.262	76.253636276	76.499898677	Pass
	-20	12.0	246.352	76.254066443	76.500418028	Pass
	-30	12.0	246.363	76.254530459	76.500893759	Pass



Test specification:		Sections 2.1055 and 95.3379 (b), Frequency Stability	
Test procedure:		ANSI C63.10, Section 9.14	
Test mode:		Verdict: PASS	
Date(s):			
04-Mar-26			
Temperature: 26 °C	Relative Humidity: 72 %	Air Pressure: 1010 hPa	Power: 12 VDC
Remarks:			

Table 7.3.4 Frequency stability test results at HF

OPERATING FREQUENCY: 76.0 – 77.0 GHz
 DETECTOR USED: Peak
 SWEEP MODE: Max hold
 SWEEP TIME: Auto
 RESOLUTION BANDWIDTH: ~1% OF SPAN
 VIDEO BANDWIDTH: < 3* RESOLUTION BANDWIDTH
 TEMPERATURE STABILIZATION PERIOD: 20 min
 POWER DURING TEMPERATURE TRANSITION: Off

Frequency, GHz	Temp., °C	Voltage, V	OBW, MHz	F low, MHz	F high, MHz	Verdict
76.0 – 77.0	50	12.0	246.258	76.747419973	76.993678129	Pass
	40	12.0	246.038	76.747738023	76.993776032	Pass
	30	12.0	246.079	76.747808564	76.993887947	Pass
	20	8.0	246.161	76.747908432	76.994069072	Pass
	20	12.0	246.196	76.747963746	76.994159555	Pass
	20	18.0	246.159	76.747890344	76.994049027	Pass
	10	12.0	246.603	76.747645732	76.994248759	Pass
	0	12.0	247.047	76.747401120	76.994448490	Pass
	-10	12.0	246.170	76.748839258	76.995009153	Pass
	-20	12.0	246.176	76.749348299	76.995524118	Pass
	-30	12.0	246.222	76.749693435	76.995915447	Pass

Reference numbers of test equipment used

HL 5376	HL 5986	HL 3291	HL 5380	HL 7522	HL 5391		
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Full description is given in Appendix A.



Test specification:		Sections 2.1053 and 95.3379 (a) (1) and 95.3379 (a) (2), Field Strength of Spurious Radiation	
Test procedure:		ANSI C63.10, Sections 9.12, 9.13	
Test mode:		Compliance	Verdict: PASS
Date(s):		15-Feb-6 - 15-Mar-26	
Temperature: 23 °C	Relative Humidity: 47 %	Air Pressure: 1012 hPa	Power: 12.0 VDC
Remarks:			

7.4 Unwanted radiated emissions

7.4.1 General

This test was performed to measure radiated unwanted emissions from the EUT. Specification test limits are given in Table 7.4.1 and Table 7.4.2

Table 7.4.1 Transmitter spurious emission limits at FCC Part 95 subpart M below 40 GHz

Frequency range, MHz	Equivalent field strength at 3 m, dB μ V/m	Measurement bandwidth, kHz	Detector
0.009 – 0.090	128.5 – 108.5	0.2	AVG
0.090 – 0.110	108.5 – 106.8	0.2	QP
0.110 – 0.150	106.8 – 104.1	0.2	AVG
0.150 – 0.490	104.1 – 93.8	9	AVG
0.490 – 1.705	73.8 - 63	9	QP
1.705 - 30	69.5	9	QP
30 - 88	40	120	QP
88 - 216	43.5	120	QP
216 - 960	46	120	QP
960 - 1000	54	120	QP
1000 - 40000	54 (74)	1000	AVG (Peak)

Table 7.4.2 Transmitter spurious emission limits at FCC Part 95 subpart M above 40 GHz

Frequency range, GHz	Limit@ 3m		Measurement bandwidth, kHz	Detector
	Pw/cm	dB μ V/m		
40-200	600	93.5 (113.5)	1000	AVG (Peak)
200 - 231	1000	95.8 (115.8)	1000	AVG (Peak)

Test procedure

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

7.4.1.2 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.

7.4.1.3 The worst test results (the lowest margins) were recorded in Table 7.4.3 and shown the associated plots.



Test specification:		Sections 2.1053 and 95.3379 (a) (1) and 95.3379 (a) (2), Field Strength of Spurious Radiation			
Test procedure:		ANSI C63.10, Sections 9.12, 9.13			
Test mode:		Compliance		Verdict: PASS	
Date(s):		15-Feb-6 - 15-Mar-26			
Temperature: 23 °C		Relative Humidity: 47 %		Air Pressure: 1012 hPa	
				Power: 12.0 VDC	
Remarks:					

Figure 7.4.1 Setup for spurious emission field strength measurements in 9 kHz to 30 MHz band

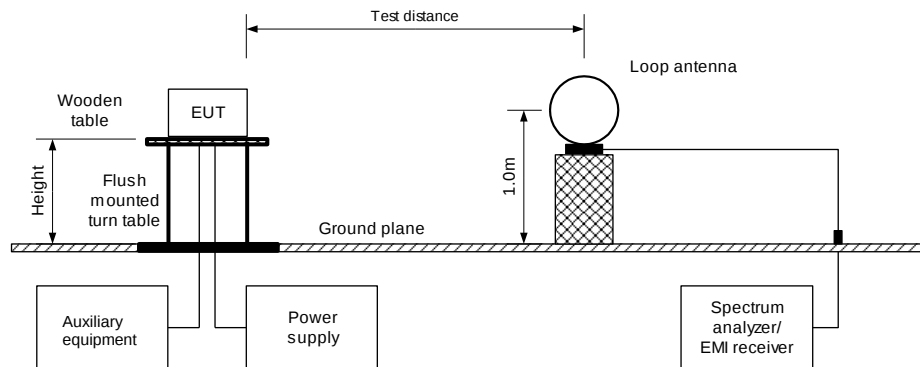
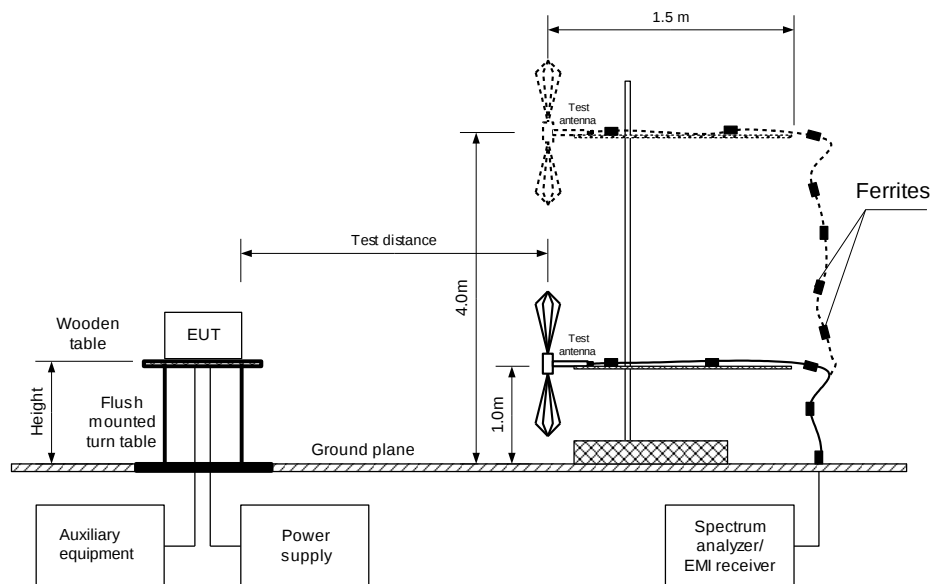


Figure 7.4.2 Setup for spurious emission field strength measurements above 30 MHz

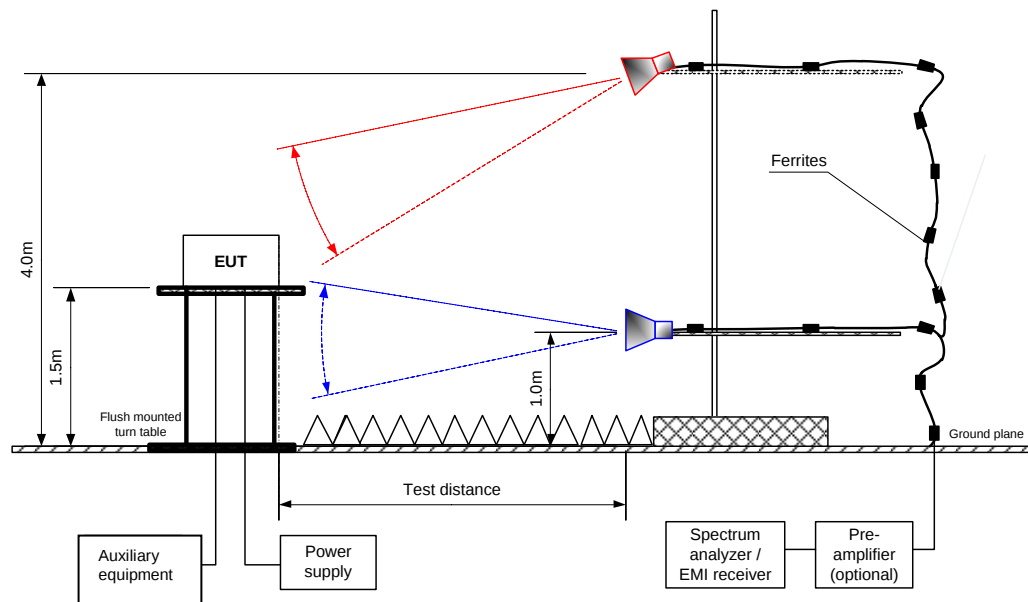




HERMON LABORATORIES

Test specification:		Sections 2.1053 and 95.3379 (a) (1) and 95.3379 (a) (2), Field Strength of Spurious Radiation			
Test procedure:		ANSI C63.10, Sections 9.12, 9.13			
Test mode:		Compliance		Verdict: PASS	
Date(s):		15-Feb-6 - 15-Mar-26			
Temperature: 23 °C		Relative Humidity: 47 %		Air Pressure: 1012 hPa	
				Power: 12.0 VDC	
Remarks:					

Figure 7.4.3 Setup for spurious emission field strength measurements above 1000 MHz





HERMON LABORATORIES

Test specification:		Sections 2.1053 and 95.3379 (a) (1) and 95.3379 (a) (2), Field Strength of Spurious Radiation	
Test procedure:		ANSI C63.10, Sections 9.12, 9.13	
Test mode:		Compliance	Verdict: PASS
Date(s):		15-Feb-6 - 15-Mar-26	
Temperature: 23 °C	Relative Humidity: 47 %	Air Pressure: 1012 hPa	Power: 12.0 VDC
Remarks:			

Table 7.4.3 Spurious emission field strength results

TEST SITE: Semi anechoic chamber
 TEST DISTANCE: 3 m
 INVESTIGATED FREQUENCY RANGE: 0.009 – 1000 MHz
 DETECTOR USED: Peak/ Quasi-Peak (below 1 GHz)
 RESOLUTION BANDWIDTH: 120 kHz (below 1GHz)
 VIDEO BANDWIDTH: 120 kHz (below 1GHz)
 FIELD STRENGTH MEASURING ANTENNA: Loop (0.009 - 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*				
Low frequency 76128 MHz								Pass
52.416	21.66	10.22	40.00	-29.78	Horizontal	4.00	102	
110.926	18.36	7.26	43.50	-36.24	Horizontal	1.75	-101	
486.015	27.62	15.48	46.00	-30.52	Horizontal	1.90	63	
498.745	26.39	15.45	46.00	-30.55	Vertical	3.87	-170	
607.639	32.16	19.08	46.00	-26.92	Horizontal	1.33	-92	
730.176	39.23	27.06	46.00	-18.94	Horizontal	1.09	-70	
Mid frequency 76376 MHz								Pass
57.828	25.94	16.57	40.00	-23.43	Vertical	1.00	-147	
70.578	28.09	19.75	40.00	-20.25	Vertical	1.00	-14	
100.554	22.67	15.49	43.50	-28.01	Vertical	1.00	-88	
940.180	32.82	22.11	46.00	-23.89	Vertical	2.39	175	
High frequency 76871 MHz								Pass
41.488	21.42	10.05	40.00	-29.95	Horizontal	3.85	-169	
111.391	18.95	7.51	43.50	-35.99	Horizontal	1.10	-159	
287.062	21.38	10.41	46.00	-35.59	Horizontal	1.34	-148	
613.582	36.45	28.30	46.00	-17.70	Vertical	1.36	11	
736.478	41.00	33.39	46.00	-12.61	Horizontal	1.00	-49	
736.503	40.72	30.77	46.00	-15.23	Horizontal	1.00	-61	



HERMON LABORATORIES

Test specification:		Sections 2.1053 and 95.3379 (a) (1) and 95.3379 (a) (2), Field Strength of Spurious Radiation	
Test procedure:		ANSI C63.10, Sections 9.12, 9.13	
Test mode:		Compliance	Verdict: PASS
Date(s):		15-Feb-6 - 15-Mar-26	
Temperature: 23 °C	Relative Humidity: 47 %	Air Pressure: 1012 hPa	Power: 12.0 VDC
Remarks:			

Table 7.4.4 Spurious emission field strength results

TEST SITE: Semi anechoic chamber
 TEST DISTANCE: 3 m
 INVESTIGATED FREQUENCY RANGE: 1000 – 40000 MHz
 DETECTOR USED: Peak/Average (above 1 GHz)
 RESOLUTION BANDWIDTH: 1.0 MHz (above 1GHz)
 VIDEO BANDWIDTH: 3.0 MHz (above 1GHz)
 FIELD STRENGTH MEASURING ANTENNA: Double ridged guide (above 1000 MHz)

Frequency, MHz	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*				
Low frequency 76128 MHz								
8458	50.78	44.71	54	-9.29	V	1.00	172	Pass
16917	48.65	44.28	54	-9.72	V	1.00	180	
Mid frequency 76376 MHz								
8486	51.79	45.84	54	-8.16	V	1.02	168	Pass
16972	51.93	42.73	54	-11.27	V	4.00	180	
High frequency 76871 MHz								
8541	48.04	40.39	54	-13.61	V	1.02	176	Pass
17082	48.76	42.66	54	-11.34	V	3.62	-117	

Table 7.4.5 Spurious emission field strength results

INVESTIGATED FREQUENCY RANGE: 40 000 – 231000 MHz
 TEST SITE: OATS
 DETECTOR USED: Average
 RESOLUTION BANDWIDTH: 1.0 MHz
 VIDEO BANDWIDTH: 3.0 MHz
 FIELD STRENGTH MEASURING ANTENNA: Double ridged guide

Frequency, MHz	Field strength, dB(μV/m)	Limit, dBμV/m	Margin, dB	Verdict
All emissions are more than 6 dB below the limit				Pass

Reference numbers of test equipment used

HL 7585	HL 0446	HL 5288	HL 4933	HL 3903	HL 5902	HL 4956	HL 5112
HL 0770	HL 5986	HL 3536	HL 3329	HL 5234	HL 5235	HL 5380	HL 0747
HL 1312	HL 3235	HL 4023	HL 5376	HL 5663	HL 3291		

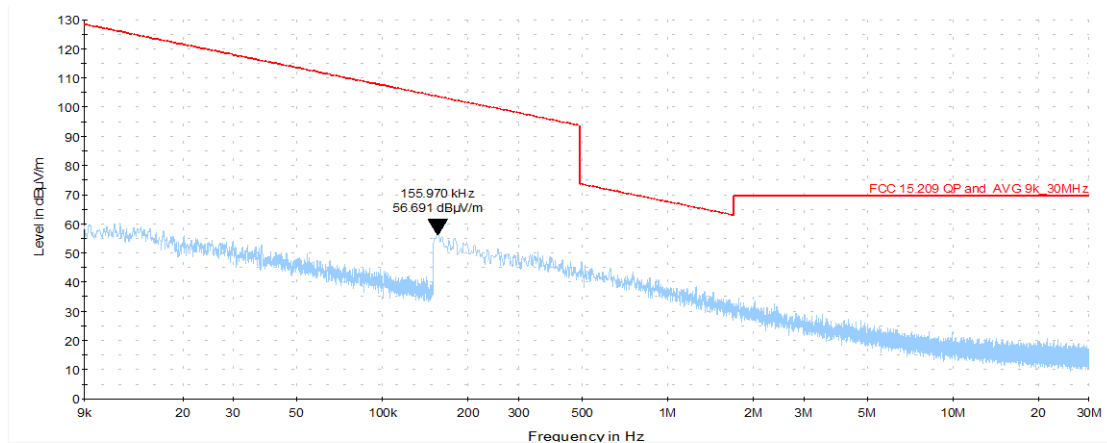
Full description is given in Appendix A.



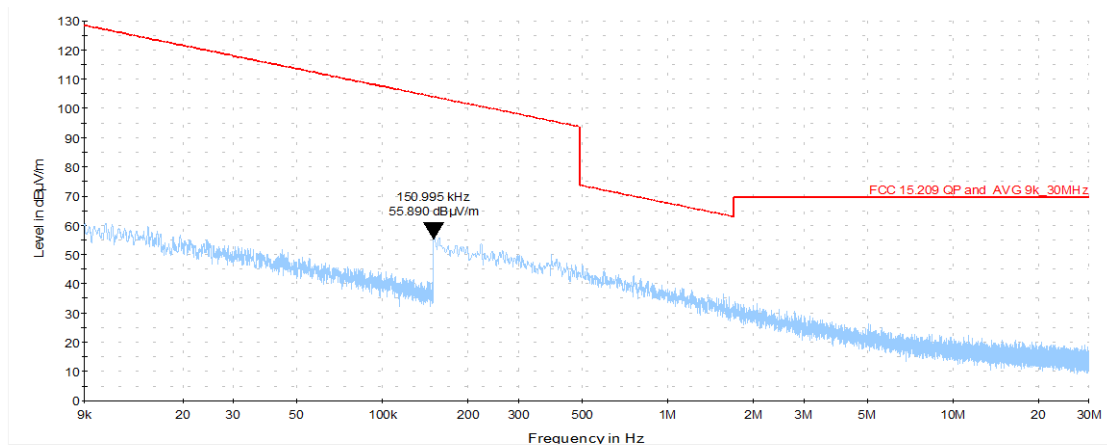
HERMON LABORATORIES

Test specification:		Sections 2.1053 and 95.3379 (a) (1) and 95.3379 (a) (2), Field Strength of Spurious Radiation	
Test procedure:		ANSI C63.10, Sections 9.12, 9.13	
Test mode:		Compliance	Verdict: PASS
Date(s):		15-Feb-6 - 15-Mar-26	
Temperature: 23 °C	Relative Humidity: 47 %	Air Pressure: 1012 hPa	Power: 12.0 VDC
Remarks:			

Plot 7.4.1 Unwanted emission test results at low carrier frequency in 0.009 – 30 MHz range



Plot 7.4.2 Unwanted emission test results at mid carrier frequency in 0.009 – 30 MHz range

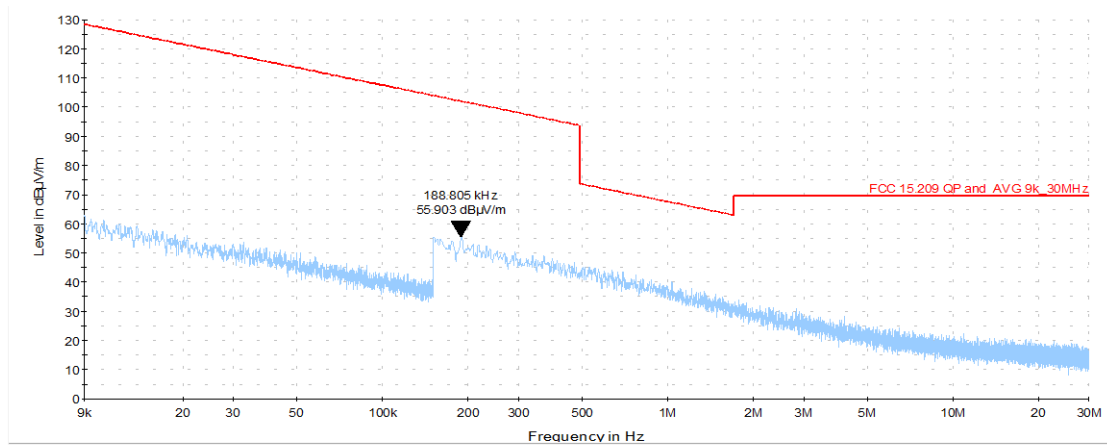




HERMON LABORATORIES

Test specification:		Sections 2.1053 and 95.3379 (a) (1) and 95.3379 (a) (2), Field Strength of Spurious Radiation	
Test procedure:		ANSI C63.10, Sections 9.12, 9.13	
Test mode:		Compliance	Verdict: PASS
Date(s):		15-Feb-6 - 15-Mar-26	
Temperature: 23 °C	Relative Humidity: 47 %	Air Pressure: 1012 hPa	Power: 12.0 VDC
Remarks:			

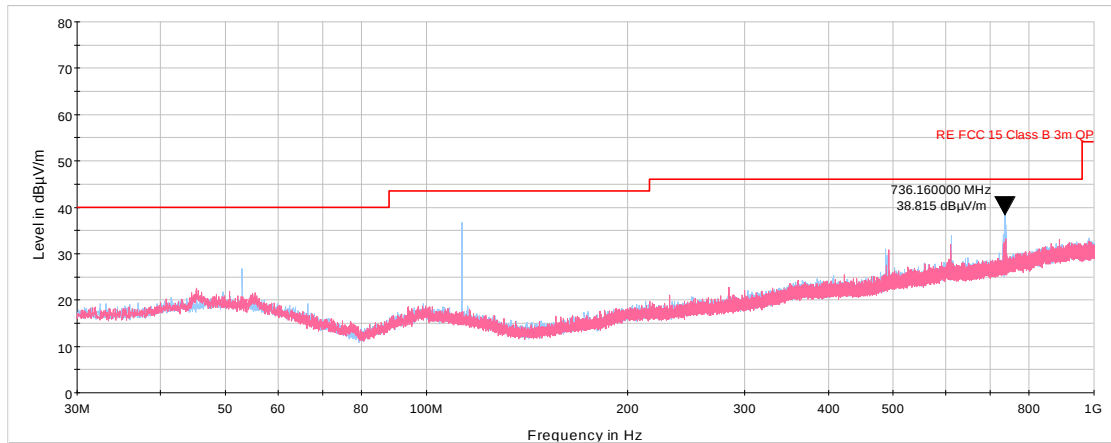
Plot 7.4.3 Unwanted emission test results at high carrier frequency in 0.009 – 30 MHz range



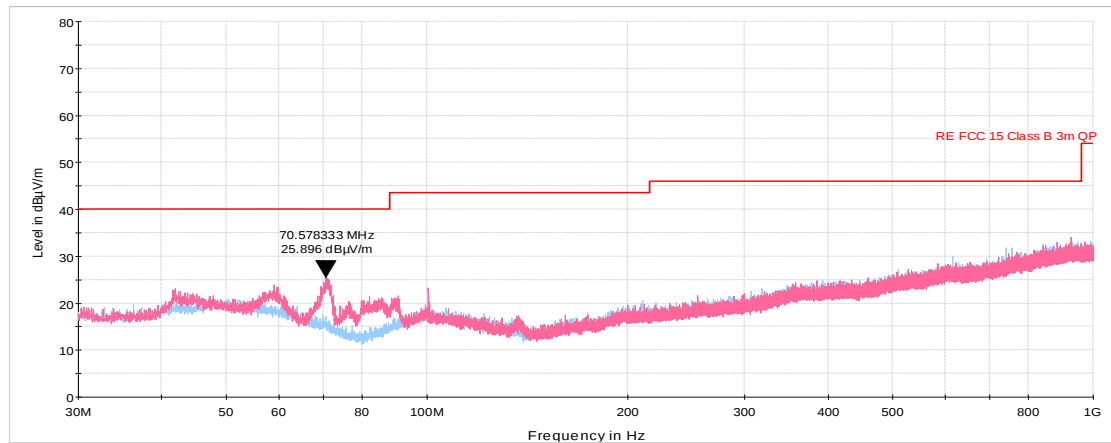


Test specification:		Sections 2.1053 and 95.3379 (a) (1) and 95.3379 (a) (2), Field Strength of Spurious Radiation	
Test procedure:		ANSI C63.10, Sections 9.12, 9.13	
Test mode:		Compliance	Verdict: PASS
Date(s):		15-Feb-6 - 15-Mar-26	
Temperature: 23 °C	Relative Humidity: 47 %	Air Pressure: 1012 hPa	Power: 12.0 VDC
Remarks:			

Plot 7.4.4 Unwanted emission test results at low carrier frequency in 30 – 1000 MHz range



Plot 7.4.5 Unwanted emission test results at mid (76376MHz) carrier frequency in 30 – 1000 MHz range

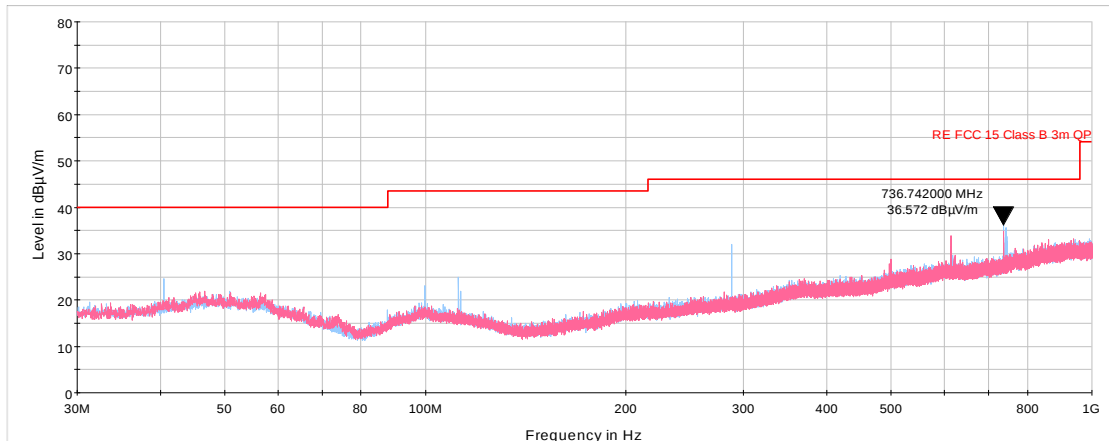




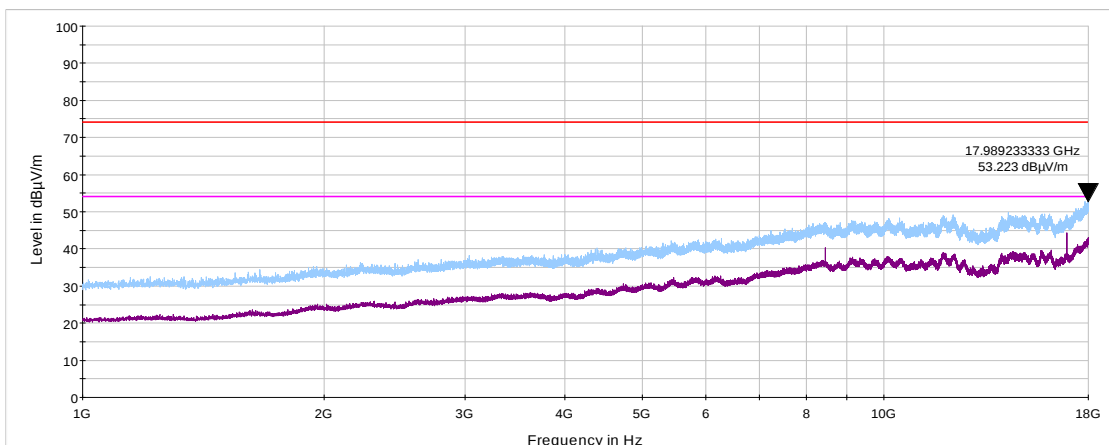
HERMON LABORATORIES

Test specification:		Sections 2.1053 and 95.3379 (a) (1) and 95.3379 (a) (2), Field Strength of Spurious Radiation	
Test procedure:		ANSI C63.10, Sections 9.12, 9.13	
Test mode:		Compliance	Verdict: PASS
Date(s):		15-Feb-6 - 15-Mar-26	
Temperature: 23 °C	Relative Humidity: 47 %	Air Pressure: 1012 hPa	Power: 12.0 VDC
Remarks:			

Plot 7.4.6 Unwanted emission test results at high carrier frequency in 30 – 1000 MHz range



Plot 7.4.7 Unwanted emission test results at low carrier frequency in 1.0 – 18 GHz range

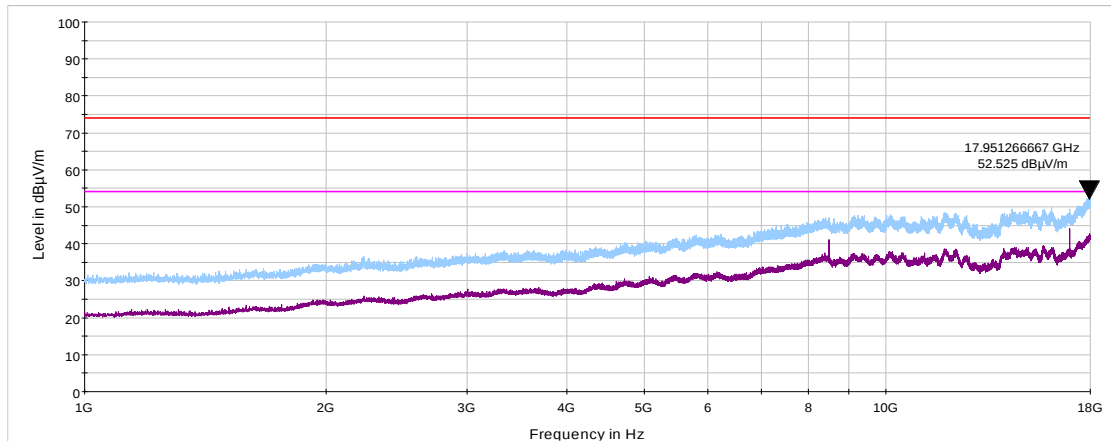




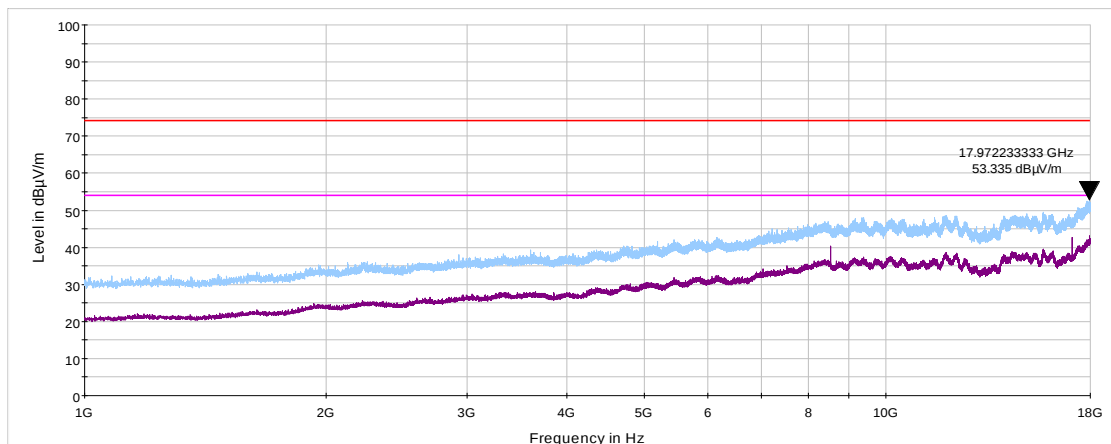
HERMON LABORATORIES

Test specification:		Sections 2.1053 and 95.3379 (a) (1) and 95.3379 (a) (2), Field Strength of Spurious Radiation	
Test procedure:		ANSI C63.10, Sections 9.12, 9.13	
Test mode:		Verdict: PASS	
Date(s):			
15-Feb-6 - 15-Mar-26			
Temperature: 23 °C	Relative Humidity: 47 %	Air Pressure: 1012 hPa	Power: 12.0 VDC
Remarks:			

Plot 7.4.8 Unwanted emission test results at mid carrier frequency in 1.0 – 18 GHz range



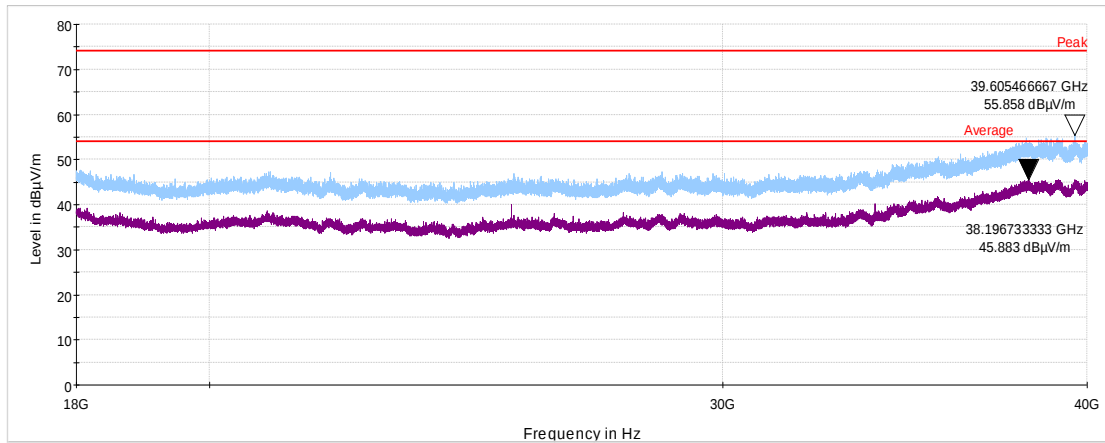
Plot 7.4.9 Unwanted emission test results at high carrier frequency in 1.0 – 18 GHz range



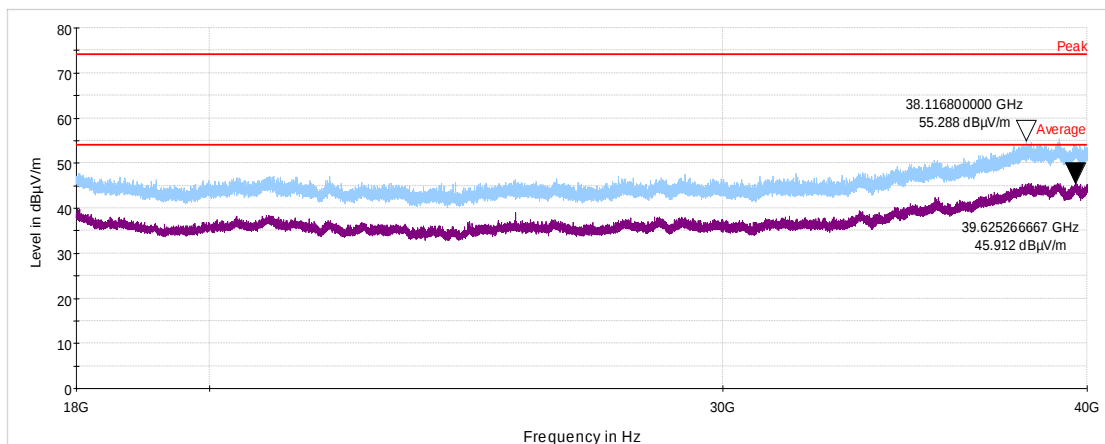


Test specification:		Sections 2.1053 and 95.3379 (a) (1) and 95.3379 (a) (2), Field Strength of Spurious Radiation	
Test procedure:		ANSI C63.10, Sections 9.12, 9.13	
Test mode:		Compliance	Verdict: PASS
Date(s):		15-Feb-6 - 15-Mar-26	
Temperature: 23 °C	Relative Humidity: 47 %	Air Pressure: 1012 hPa	Power: 12.0 VDC
Remarks:			

Plot 7.4.10 Unwanted emission test results at low carrier frequency in 18 – 40 GHz range



Plot 7.4.11 Unwanted emission test results at mid carrier frequency in 18 – 40 GHz range

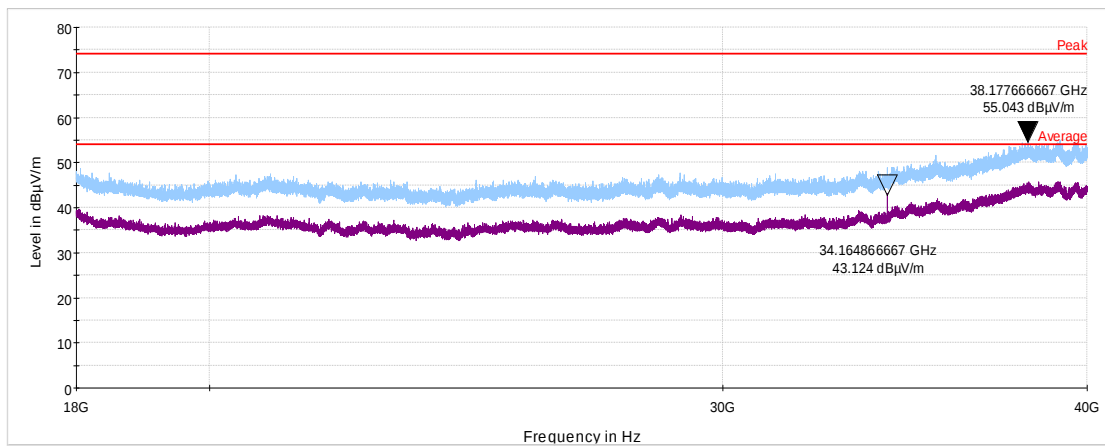




HERMON LABORATORIES

Test specification:		Sections 2.1053 and 95.3379 (a) (1) and 95.3379 (a) (2), Field Strength of Spurious Radiation	
Test procedure:		ANSI C63.10, Sections 9.12, 9.13	
Test mode:		Compliance	Verdict: PASS
Date(s):		15-Feb-6 - 15-Mar-26	
Temperature: 23 °C	Relative Humidity: 47 %	Air Pressure: 1012 hPa	Power: 12.0 VDC
Remarks:			

Plot 7.4.12 Unwanted emission test results at high carrier frequency in 18 – 40 GHz range





HERMON LABORATORIES

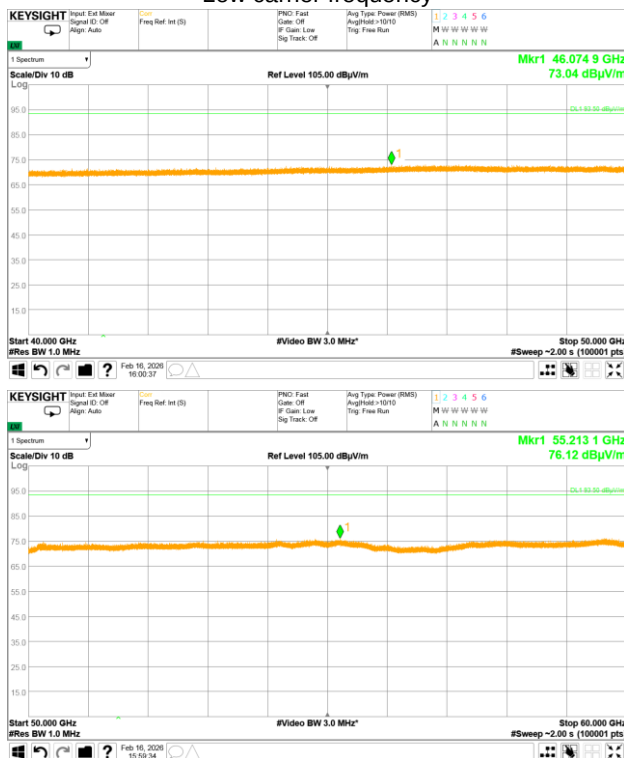
Test specification:		Sections 2.1053 and 95.3379 (a) (1) and 95.3379 (a) (2), Field Strength of Spurious Radiation	
Test procedure:		ANSI C63.10, Sections 9.12, 9.13	
Test mode:		Compliance	Verdict: PASS
Date(s):		15-Feb-6- - 15-Mar-26	
Temperature: 23 °C	Relative Humidity: 47 %	Air Pressure: 1012 hPa	Power: 12.0 VDC
Remarks:			

Plot 7.4.13 Unwanted emission test results in 40.0 – 60 GHz range

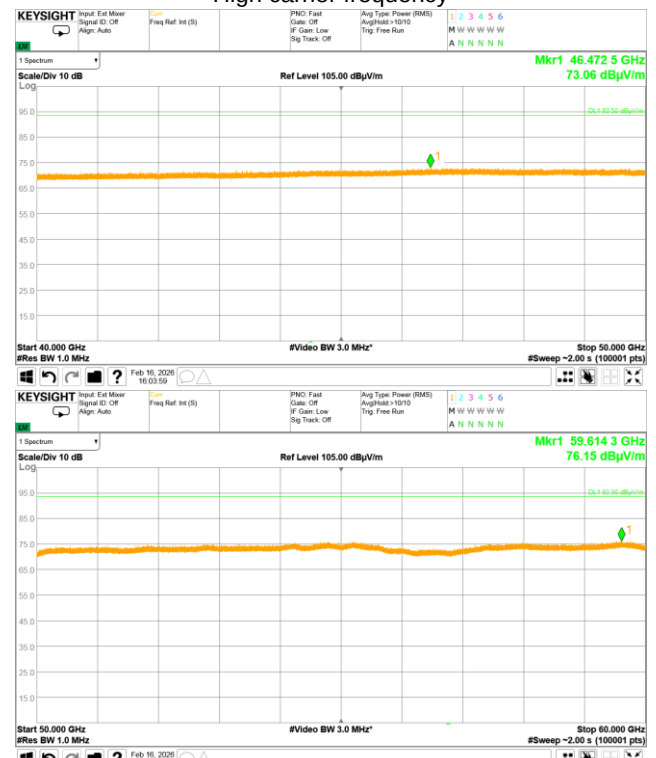
DISTANCE
DETECTOR:
ANTENNA POLARIZATION:

3 m (limit 93.5 dBuV/m)
Average
Vertical and Horizontal

Low carrier frequency



High carrier frequency





HERMON LABORATORIES

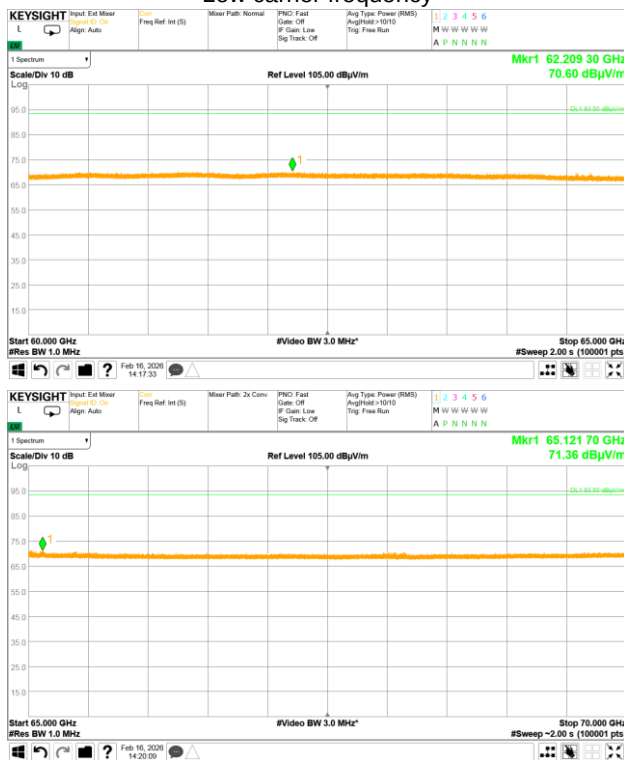
Test specification:		Sections 2.1053 and 95.3379 (a) (1) and 95.3379 (a) (2), Field Strength of Spurious Radiation	
Test procedure:		ANSI C63.10, Sections 9.12, 9.13	
Test mode:		Compliance	Verdict: PASS
Date(s):		15-Feb-6- - 15-Mar-26	
Temperature: 23 °C	Relative Humidity: 47 %	Air Pressure: 1012 hPa	Power: 12.0 VDC
Remarks:			

Plot 7.4.14 Unwanted emission test results in 60 – 70 GHz range

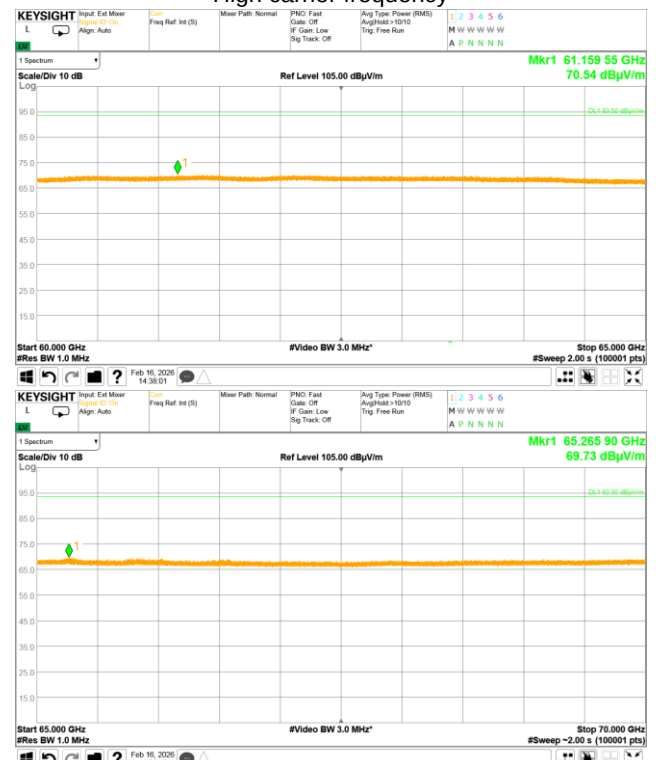
DISTANCE
DETECTOR:
ANTENNA POLARIZATION:

3 m (limit 93.5 dBuV/m)
Average
Vertical and Horizontal

Low carrier frequency



High carrier frequency



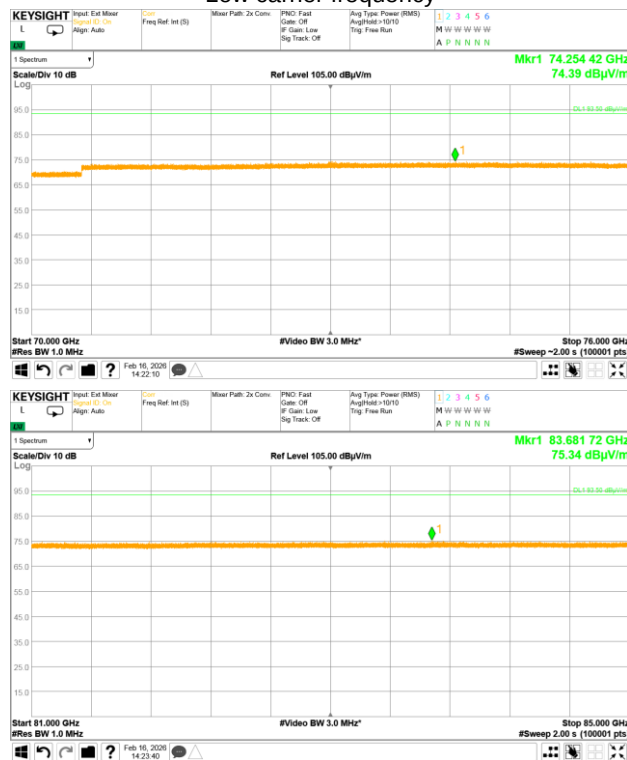
Test specification:		Sections 2.1053 and 95.3379 (a) (1) and 95.3379 (a) (2), Field Strength of Spurious Radiation	
Test procedure:		ANSI C63.10, Sections 9.12, 9.13	
Test mode:		Compliance	Verdict: PASS
Date(s):		15-Feb-6 - 15-Mar-26	
Temperature: 23 °C	Relative Humidity: 47 %	Air Pressure: 1012 hPa	Power: 12.0 VDC
Remarks:			

Plot 7.4.15 Unwanted emission test results in 70 – 90 GHz range

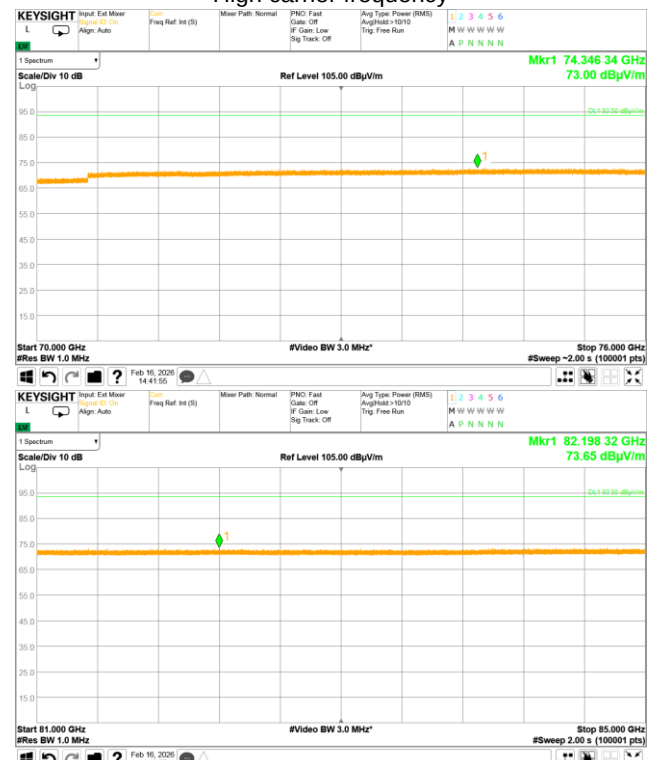
DISTANCE
DETECTOR:
ANTENNA POLARIZATION:

3 m (limit 93.5 dBuV/m)
Average
Vertical and Horizontal

Low carrier frequency



High carrier frequency





HERMON LABORATORIES

Test specification:		Sections 2.1053 and 95.3379 (a) (1) and 95.3379 (a) (2), Field Strength of Spurious Radiation	
Test procedure:		ANSI C63.10, Sections 9.12, 9.13	
Test mode:		Compliance	Verdict: PASS
Date(s):		15-Feb-6 - 15-Mar-26	
Temperature: 23 °C	Relative Humidity: 47 %	Air Pressure: 1012 hPa	Power: 12.0 VDC
Remarks:			

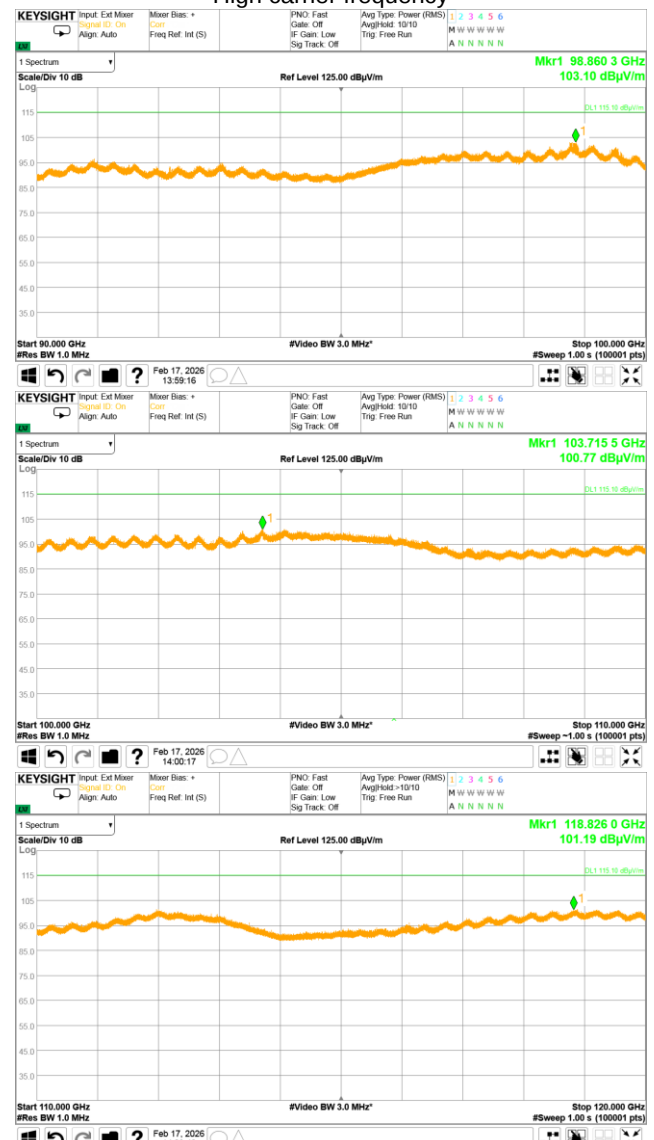
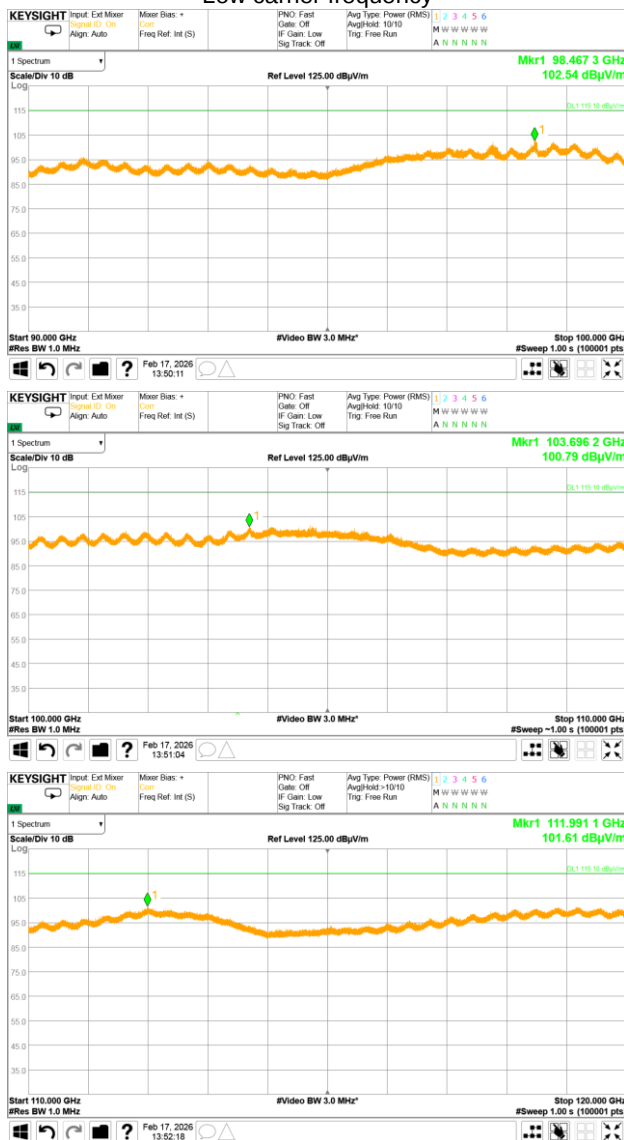
Plot 7.4.16 Unwanted emission test results in 90.0 – 120.0 GHz range

DISTANCE
DETECTOR:
ANTENNA POLARIZATION:

0.25 m (limit 115.1 dBuV/m)*
Average
Vertical and Horizontal

Low carrier frequency

High carrier frequency



*- The limit for 0.25m test distance was calculated using the inverse distance extrapolation factor as follows:
 $Lims_2 = Lims_1 + 20 \log (S_1/S_2)$, where S_1 and S_2 – standard defined and test distance respectively in meters.



HERMON LABORATORIES

Test specification:		Sections 2.1053 and 95.3379 (a) (1) and 95.3379 (a) (2), Field Strength of Spurious Radiation	
Test procedure:		ANSI C63.10, Sections 9.12, 9.13	
Test mode:		Compliance	Verdict: PASS
Date(s):		15-Feb-6 - 15-Mar-26	
Temperature: 23 °C	Relative Humidity: 47 %	Air Pressure: 1012 hPa	Power: 12.0 VDC
Remarks:			

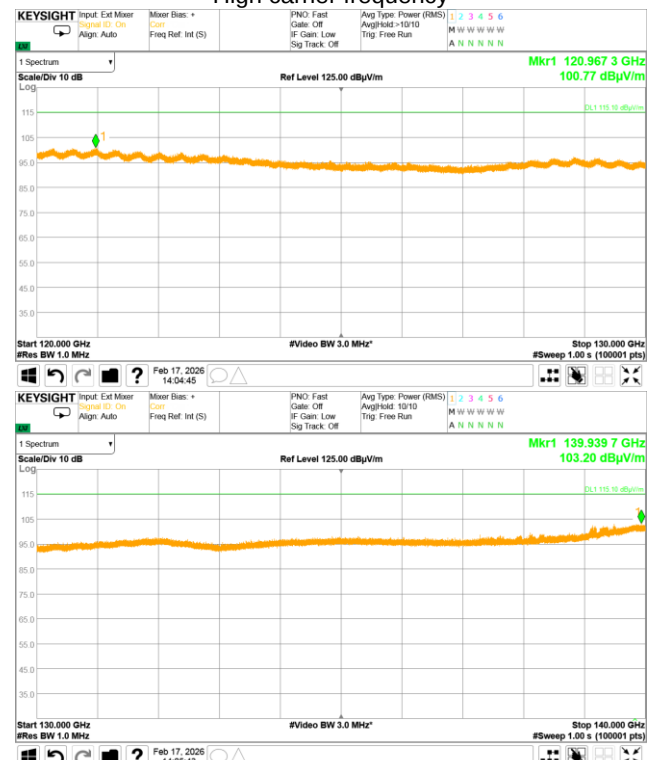
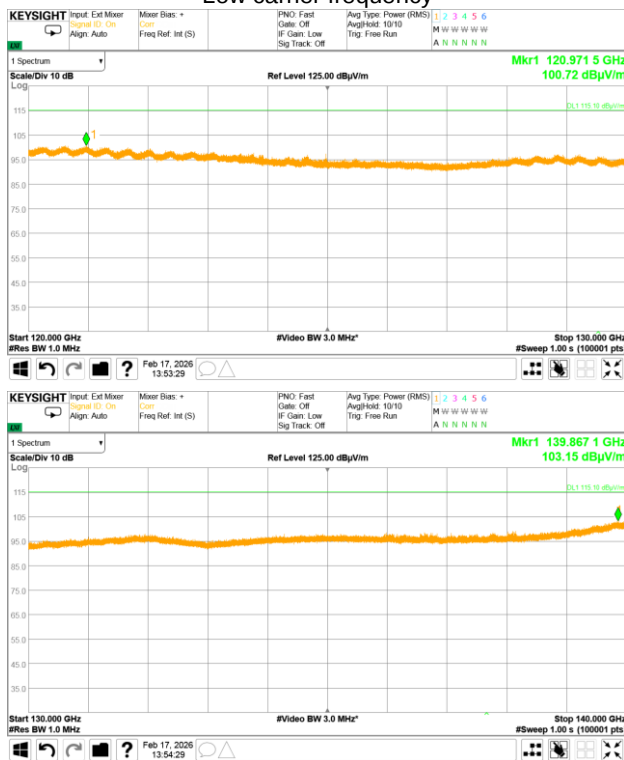
Plot 7.4.17 Unwanted emission test results in 120.0 – 140.0 GHz range

DISTANCE
DETECTOR:
ANTENNA POLARIZATION:

0.25 m (limit 115.1 dBuV/m)*
Average
Vertical and Horizontal

Low carrier frequency

High carrier frequency



*- The limit for 0.25m test distance was calculated using the inverse distance extrapolation factor as follows:
$$Lims_2 = Lims_1 + 20 \log (S_1/S_2)$$
, where S_1 and S_2 – standard defined and test distance respectively in meters.



HERMON LABORATORIES

Test specification:		Sections 2.1053 and 95.3379 (a) (1) and 95.3379 (a) (2), Field Strength of Spurious Radiation	
Test procedure:		ANSI C63.10, Sections 9.12, 9.13	
Test mode:		Compliance	Verdict: PASS
Date(s):		15-Feb-6 - 15-Mar-26	
Temperature: 23 °C	Relative Humidity: 47 %	Air Pressure: 1012 hPa	Power: 12.0 VDC
Remarks:			

Plot 7.4.18 Unwanted emission test results in 140.0 – 170.0 GHz range

DISTANCE

DETECTOR:

ANTENNA POLARIZATION:

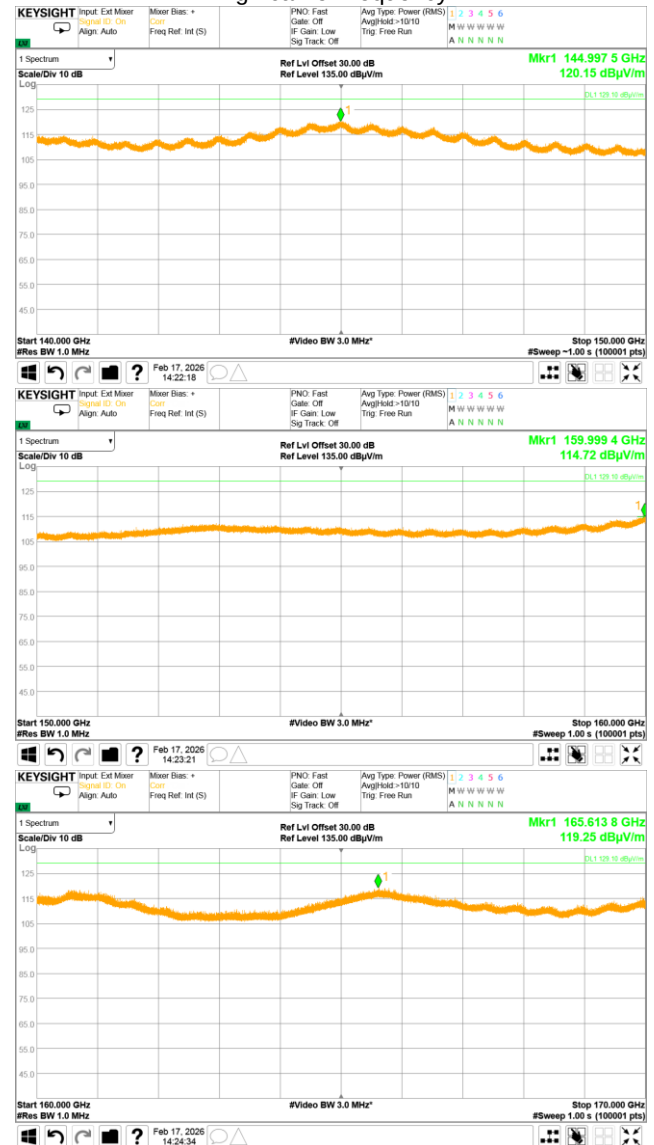
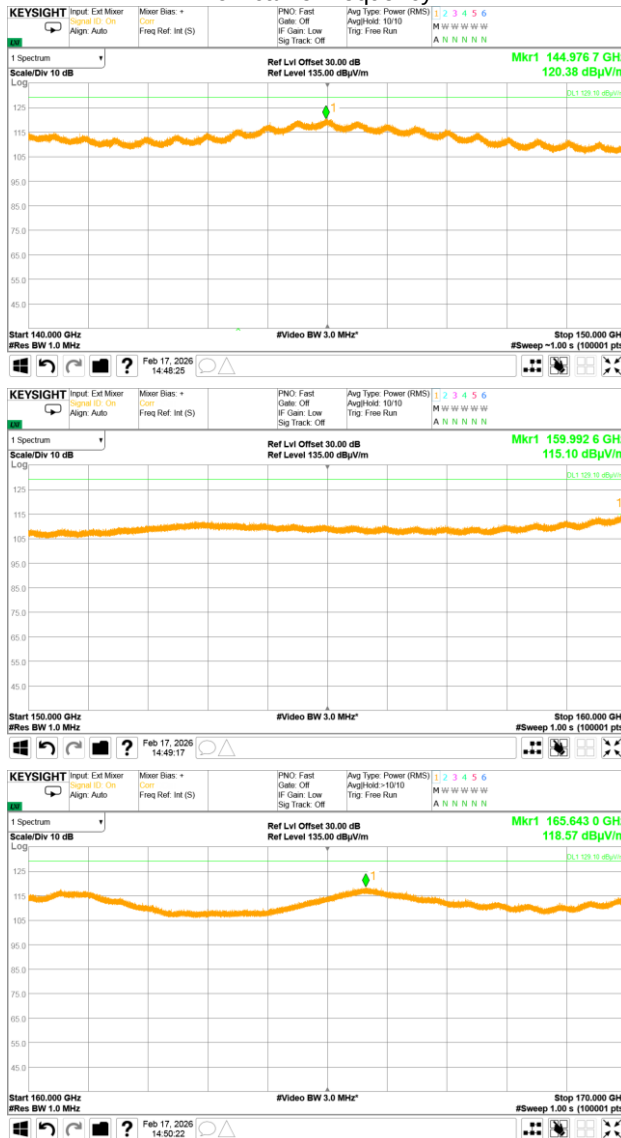
0.05 m (limit 129.1 dBuV/m)*

Average

Vertical and Horizontal

Low carrier frequency

High carrier frequency



*- The limit for 0.05m test distance was calculated using the inverse distance extrapolation factor as follows:
$$\text{Lim}_{S_2} = \text{Lim}_{S_1} + 20 \log(S_1/S_2)$$
, where S_1 and S_2 – standard defined and test distance respectively in meters.



HERMON LABORATORIES

Test specification:		Sections 2.1053 and 95.3379 (a) (1) and 95.3379 (a) (2), Field Strength of Spurious Radiation	
Test procedure:		ANSI C63.10, Sections 9.12, 9.13	
Test mode:		Compliance	Verdict: PASS
Date(s):		15-Feb-6- - 15-Mar-26	
Temperature: 23 °C	Relative Humidity: 47 %	Air Pressure: 1012 hPa	Power: 12.0 VDC
Remarks:			

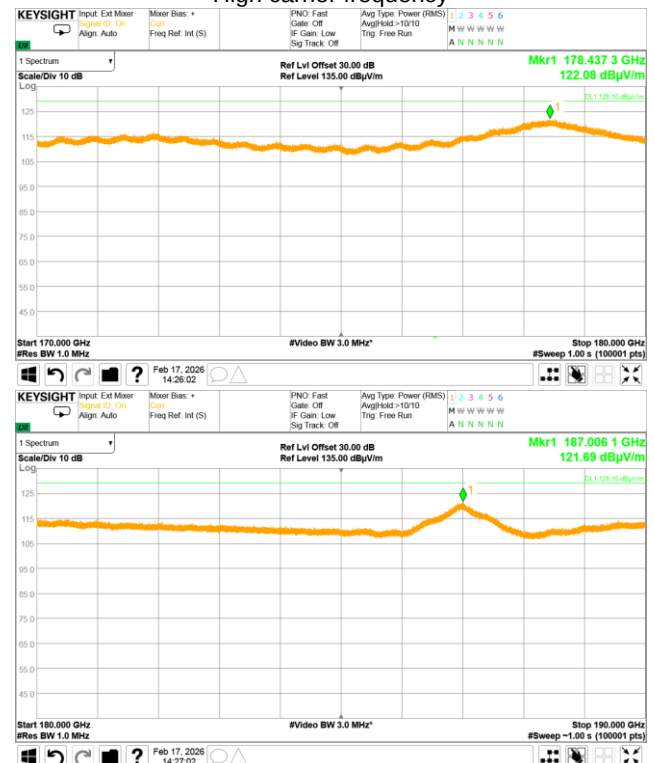
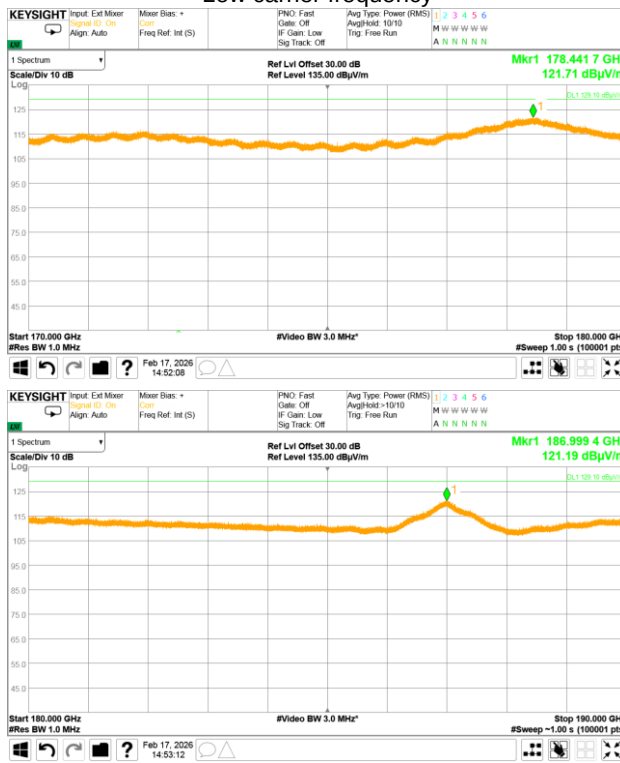
Plot 7.4.19 Unwanted emission test results in 170.0 – 190.0 GHz range

DISTANCE
DETECTOR:
ANTENNA POLARIZATION:

0.05 m (limit 129.1 dBuV/m)*
Average
Vertical and Horizontal

Low carrier frequency

High carrier frequency



*- The limit for 0.05m test distance was calculated using the inverse distance extrapolation factor as follows:
$$\text{Lim}_{S_2} = \text{Lim}_{S_1} + 20 \log (S_1/S_2), \text{ where } S_1 \text{ and } S_2 - \text{standard defined and test distance respectively in meters.}$$



HERMON LABORATORIES

Test specification:		Sections 2.1053 and 95.3379 (a) (1) and 95.3379 (a) (2), Field Strength of Spurious Radiation	
Test procedure:		ANSI C63.10, Sections 9.12, 9.13	
Test mode:		Compliance	Verdict: PASS
Date(s):		15-Feb-6 - 15-Mar-26	
Temperature: 23 °C	Relative Humidity: 47 %	Air Pressure: 1012 hPa	Power: 12.0 VDC
Remarks:			

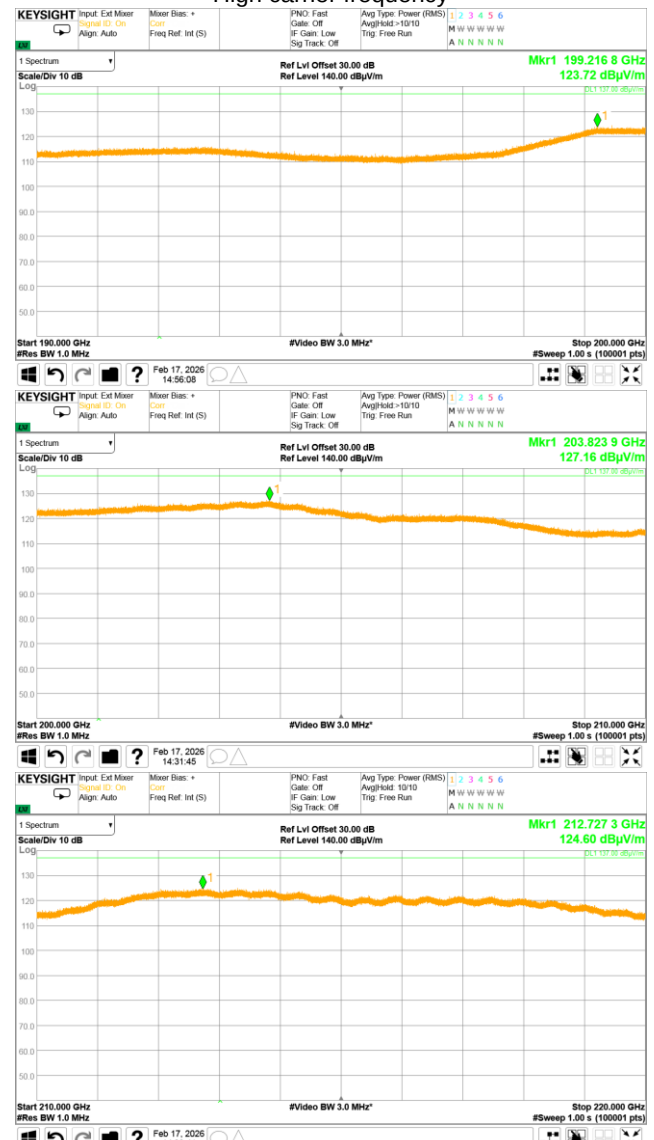
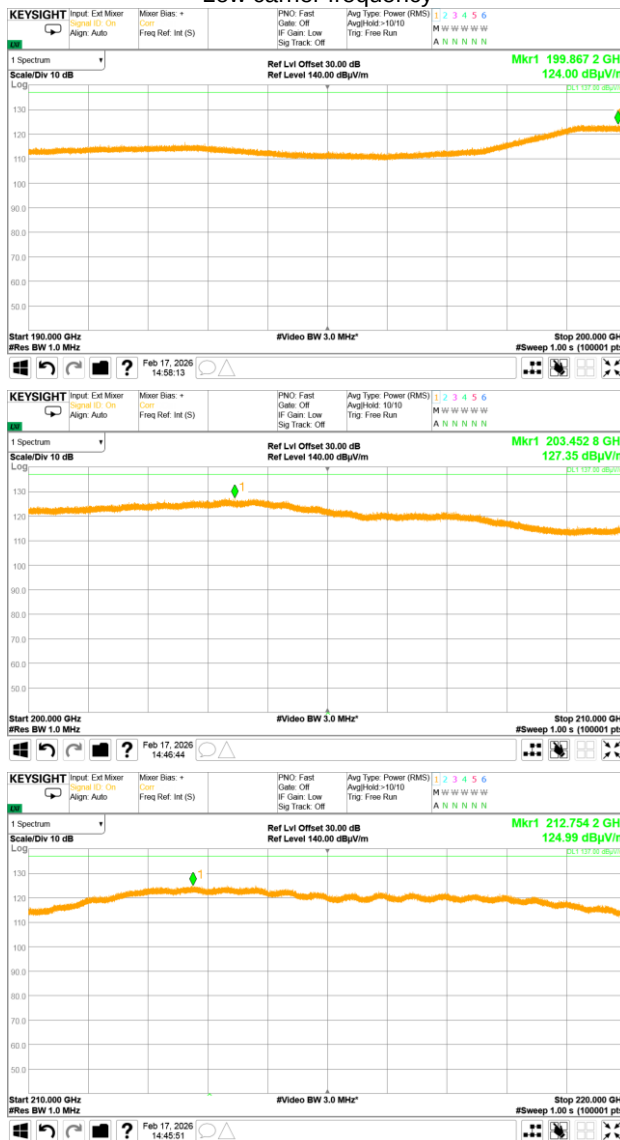
Plot 7.4.20 Unwanted emission test results in 190.0 – 220.0 GHz range

DISTANCE
DETECTOR:
ANTENNA POLARIZATION:

0.02 m (limit 137.0 dBuV/m)*
Average
Vertical and Horizontal

Low carrier frequency

High carrier frequency



*- The limit for 0.02m test distance was calculated using the inverse distance extrapolation factor as follows:
$$\text{Lim}_{S2} = \text{Lim}_{S1} + 20 \log (S_1/S_2), \text{ where } S_1 \text{ and } S_2 - \text{standard defined and test distance respectively in meters.}$$



HERMON LABORATORIES

Test specification:		Sections 2.1053 and 95.3379 (a) (1) and 95.3379 (a) (2), Field Strength of Spurious Radiation	
Test procedure:		ANSI C63.10, Sections 9.12, 9.13	
Test mode:		Compliance	Verdict: PASS
Date(s):		15-Feb-6- - 15-Mar-26	
Temperature: 23 °C	Relative Humidity: 47 %	Air Pressure: 1012 hPa	Power: 12.0 VDC
Remarks:			

Plot 7.4.21 Unwanted emission test results in 220.0 – 231.0 GHz range

DISTANCE

DETECTOR:

ANTENNA POLARIZATION:

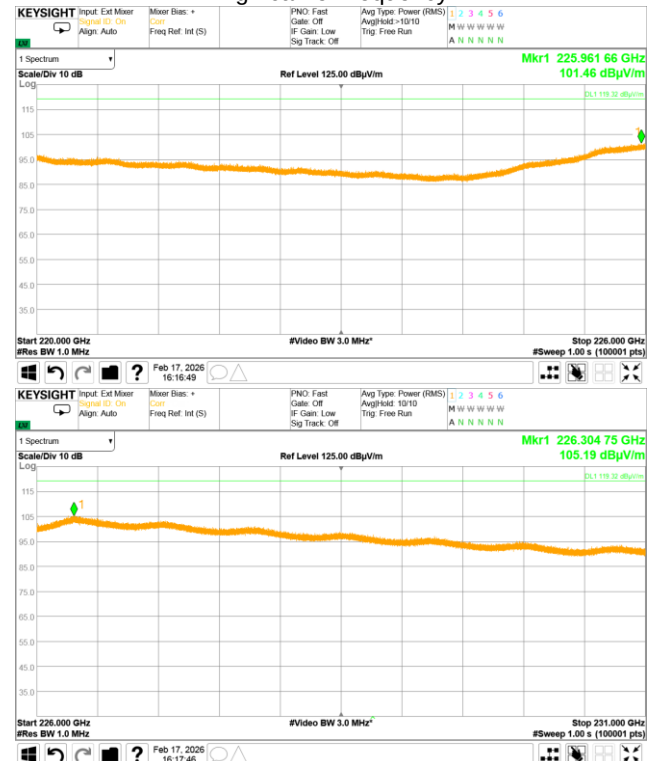
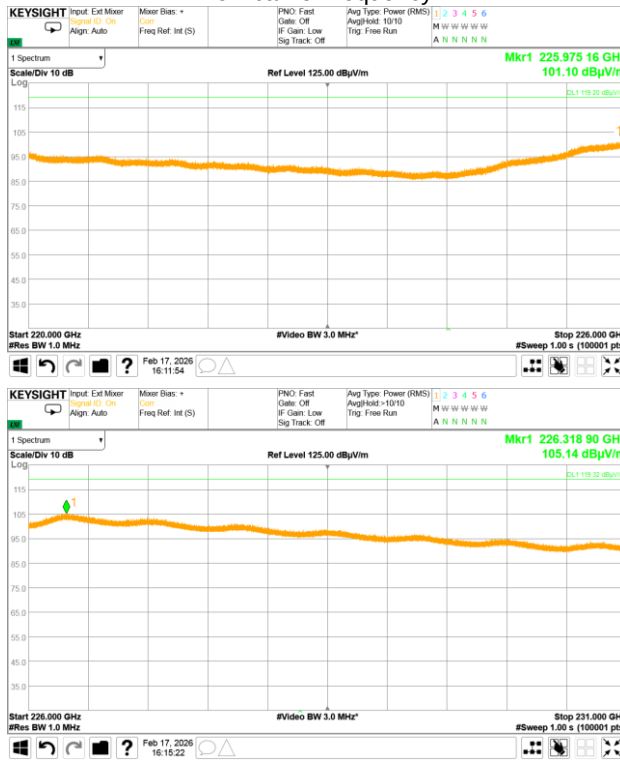
0.2 m (limit 119.32 dBuV/m)*

Average

Vertical and Horizontal

Low carrier frequency

High carrier frequency



*- The limit for 0.2m test distance was calculated using the inverse distance extrapolation factor as follows:
$$\text{Lim}_{S_2} = \text{Lim}_{S_1} + 20 \log (S_1/S_2), \text{ where } S_1 \text{ and } S_2 - \text{standard defined and test distance respectively in meters.}$$

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
0747	Mixer, Millimeter Wave Harmonic 90 - 140 GHz	Oleson Microwave Labs	M08HWD	F80429-1	10-Mar-23	10-Mar-26
0770	Antenna Standard Gain Horn, 40-60 GHz WR-19, U-band, 24 dB mid-band gain	Quinstar Technology	QWH-1900-AA	118	23-Oct-25	23-Oct-26
0771	Antenna Standard Gain Horn, 60-90 GHz, WR-12, 24 dB mid-band gain	Quinstar Technology	QWH-1200-AA	111	23-Oct-25	23-Oct-26
1312	Mixer Millimeter Wave Harmonic 140-220 GHz	Oleson Microwave Labs	M05HWD	G91112-1	10-Mar-23	10-Mar-26
3235	Harmonic mixer 40 to 60 GHz	Agilent Technologies	11970U	MY30030182	06-Mar-23	06-Mar-26
3291	Attenuator, direct reading, 60 to 90 GHz, 0.2 W	Quinstar Technology	QAD-E00000	10381009	27-Oct-25	27-Oct-26
3293	Frequency multiplier, input 20-30 GHz, output 60-90 GHz	Quinstar Technology	QPM-75003E	10381003	23-Oct-25	23-Oct-26
3329	Antenna Standard Gain Horn, 140-220 GHz, WR-5, 24 dB mid-band gain	Quinstar Technology			23-Oct-25	23-Oct-26
3536	Antenna Standard Gain Horn, 90-140 GHz, WR-8, 24 dB mid-band gain	Quinstar Technology	QWH-FPRR00	11159004001	23-Oct-25	23-Oct-26
3901	Microwave Cable Assembly, 40.0 GHz, 3.5 m, SMA/SMA	Huber-Suhner	SUCOFL EX 102A	1225/2A	19-May-25	19-Jun-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
4023	Diplexer for use OML mixers with Agilent spectrum analyzer	Oleson Microwave Labs	DPL.26	NA	23-Oct-25	23-Oct-26
4856	Amplifier, solid state, 18 GHz to 40 GHz, 20 dBm output power	Quinstar Technology	QGW-18402023-JO	16779001001	14-May-25	14-May-26
4933	Active Horn Antenna, 1 GHz to 18 GHz	COM-POWER CORPORATION	AHA-118	701046	19-Feb-25	19-Feb-26
4956	Active horn antenna, 18 to 40 GHz	COM-POWER CORPORATION	AHA-840	105004	25-Mar-25	25-Mar-26



5112	RF cable, 40 GHz, 5.5 m, K-type	Huber-Suhner	SF102EA/ 11SK/11S K/5500M M	502494/2E A	09-Jun-25	09-Jun-26
5234	WR8 to WR6 Waveguide Transition. Freq. Range: 110.0 - 140.0 GHz	AINFO(HK)LI MITED	86WA- 30_Cu	J50506161 6	23-Oct-25	23-Oct-26
5235	WR8 to WR6 Waveguide Transition. Freq. Range: 110.0 - 140.0 GHz	AINFO(HK)LI MITED	86WA- 30_Cu	J50506161 7	23-Oct-25	23-Oct-26
5288	Trilog Antenna, 25 MHz - 8 GHz, 100W	Frankonia	ALX- 8000E	00809	08-Apr-25	08-Apr-27
5371	EXG Analog Signal Generator, 9 kHz - 40 GHz	Keysight Technologies	N5173B	MY572805 40	18-May-25	18-May-26
5376	EXA Signal Analyzer, 10 Hz - 32 GHz	Keysight Technologies	N9010B	MY574704 04	17-Mar-25	17-Mar-26
5377	USB Thermocouple Power Sensor, DC- 120 GHz	Keysight Technologies	U8489A	US564301 58	19-Sep-25	19-Sep-26
5380	Waveguide Harmonic Mixer 55-90GHz	Keysight Technologies	M1971E	MY561302 39	14-Mar-25	14-Mar-27
5391	Temperature/Humidity Cycle Chamber, - 77 - +177 deg., Humidity Range 20% RH to 95% RH	Thermotron	SM-8C	27737	29-Sep-25	29-Sep-26
5409	RF cable, 40 GHz, SMA-SMA, 2 m	Huber-Suhner	SF102EA/ 11SK/11S K/2000M M	503973/2E A	09-Jun-25	09-Jun-26
5663	Cable, 1. SF102EA/ 11SK(x2)/ 5.5M, 40 GHz	Huber-Suhner	SF102EA	505604/2E A	02-Nov-25	02-Nov-26
5902	RF cable, 18 GHz, 6.0m, N-type	Huber-Suhner	SF126EA/ 11N/11N/ 6000	NA	24-Apr-25	24-Apr-26
5986	Piramidal Horn antenna, 60 - 90 GHz, WR-12, 24 dB mid-band gain	Quinstar Technology	QWH- EPRR00	NA	23-Oct-25	23-Oct-26
7522	Programmable DC Power Supplies, 48VDC/38A	TDK-Lambda Ltd	GEN40- 38	LOC- 823A277- 0001	25-Feb-25	25-Feb-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 V/m.

HL 4933: Active Horn Antenna
COM-POWER CORPORATION, model: AHA-118, s/n 701046

Frequency, MHz	Measured antenna factor (with preamplifier), dB/m
1000	-16.1
1500	-15.1
2000	-10.9
2500	-11.9
3000	-11.1
3500	-10.6
4000	-8.6
4500	-8.3
5000	-5.9
5500	-5.7
6000	-3.3
6500	-4.0
7000	-2.2
7500	-1.7
8000	1.1
8500	-0.8
9000	-1.5
9500	-0.2

Frequency, MHz	Measured antenna factor (with preamplifier), dB/m
10000	1.8
10500	1.0
11000	0.3
11500	-0.5
12000	3.1
12500	1.4
13000	-0.3
13500	-0.4
14000	2.5
14500	2.2
15000	1.9
15500	0.5
16000	2.1
16500	1.2
17000	0.6
17500	3.1
18000	4.2

The antenna factor shall be added to receiver reading in dB μ V to obtain field strength in dB μ V/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
Transmitter tests	
Carrier power radiated (substitution method)	± 4.5 dB
Occupied bandwidth	$\pm 8\%$
Spurious emissions radiated 30 MHz – 40 GHz (substitution method)	± 4.5 dB
Frequency error	30 – 300 MHz: ± 50.5 Hz (1.68 ppm) 300 – 1000 MHz: ± 168 Hz (0.56 ppm)

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 are R-10808 for OATS, R-1082 for anechoic chamber, 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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12 APPENDIX E Specification references

FCC 47CFR part 95: 2024	Personal Radio Services
ANSI C63.10: 2020	American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices

13 APPENDIX F Abbreviations and acronyms

A	ampere
AC	alternating current
AM	amplitude modulation
AVRG	average (detector)
BB	broad band
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
EIRP	equivalent isotropically radiated power
ERP	effective radiated power
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
NB	narrow band
OATS	open area test site
Ω	Ohm
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