

TEST REPORT

ACCORDING TO: FCC CFR 47 Part 95, subpart M

FOR:

Arbe Robotics Ltd
Arbe 4D Image Radar System
Model: E-PHO-ARB-B0
FCC ID: 2BUV6-ARP-B05C

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1 Applicant information

Client name: Arbe RoboticsLtd.
Address: Hashmonaim 88, Tel Aviv, Israel
Telephone: 050-4047056
E-mail: roei.r@arberobotics.com
Contact name: Mr. Roei Roeimi

2 Equipment under test attributes

Product name: Arbe 4D Image Radar System
Product type: Automotive
Model(s): E-PHO-ARB-B0
Serial number: SN0226017 B05C
Hardware version: B0.5B
Software release: 3.3.0.9
Receipt date: 22-Jan-26

3 Manufacturer information

Manufacturer name: Arbe RoboticsLtd.
Address: Hashmonaim 88, Tel Aviv, Israel
Telephone: 050-4047056
E-Mail: roei.r@arberobotics.com
Contact name: Mr. Roei Roeimi

4 Test details

Project ID: 173834
Location: Hermon Laboratories Ltd. 66 HaTachana str., P.O. Box 23, Binyamina 3055001, Israel
Test started: 03-Jan-26
Test completed: 10-Feb-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

This test report supersedes the previously issued test report identified by Doc ID: ARBRAD_FCC.173834

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. M. Filobodchenko, test engineer, EMC & Radio Mr. S. Sugatov, test engineer, EMC & Radio	03-Jan-26 – 10-Feb-26	 
Reviewed by:	Mrs. S. Peysahov Sheynin, certification engineer, EMC & Radio	13-Feb-26	
Approved by:	Mr. M. Nikishin, group leader, EMC & Radio	10-Mar-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 Arbe Robotics E-PHO-ARB-B0 Radar System. The FMCW radar system is based on Arbe chipset solution, with 24 transmitting elements per chip and 12 receiving elements per chip Arbe offer up to 48x48 matrix solution all managed by Arbe EVEREST IC. The board includes on board Everest management IC connected to an external flash and RAM (LPDDR4). A single input/output connector supplies 6V-36V input power and includes Ethernet and 2 CAN interfaces. Power management regulators, LDO's, power layout recommendations and power sequence are specified in AN-2xxx application note.

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		
	fixed	Always at a distance more than 2 m from all people		
V	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		76.220 GHz		
Maximum rated output power		Peak EIRP /1 MHz	32.77 dBm	
		AVR EIRP	31.83 dBm	
Is transmitter output power variable?	V	No		
		Yes	continuous variable	
			stepped variable with stepsize	dB
			minimum RF power	dBm
			maximum RF power	
Antenna connection				
unique coupling	standard connector	V	Integral	
		V	with temporary RF connector	
			without temporary RF connector	
Antenna/s technical characteristics				
Type	Manufacturer	Model number	Gain	
Wave Guide	Arbe RoboticsLtd.	N/A	9dBi	
Transmitter aggregate data rate/s		N/A		
Type of modulation		CTDM		
Modulating test signal (baseband)		FMCW		
Transmitter power source				
		Nominal rated voltage	Battery type	
V	DC	Nominal rated voltage	12 V	
		Voltage range		
	AC mains	Nominal rated voltage	Frequency	
Common power source for transmitter and receiver		V	yes no	



Test specification: Section 2.1049, Occupied bandwidth			
Test procedure: ANSI C63.10, Section 9.3			
Test mode: Compliance		Verdict: PASS	
Date(s): 26-Jan-26			
Temperature: 24 °C	Relative Humidity: 52 %	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

7.1.3 Test procedure for field strength measurements

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

7.1.3.2 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.

7.1.3.3 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.

7.1.4 Test procedure for substitution ERP measurements

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

7.1.4.2 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.

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

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

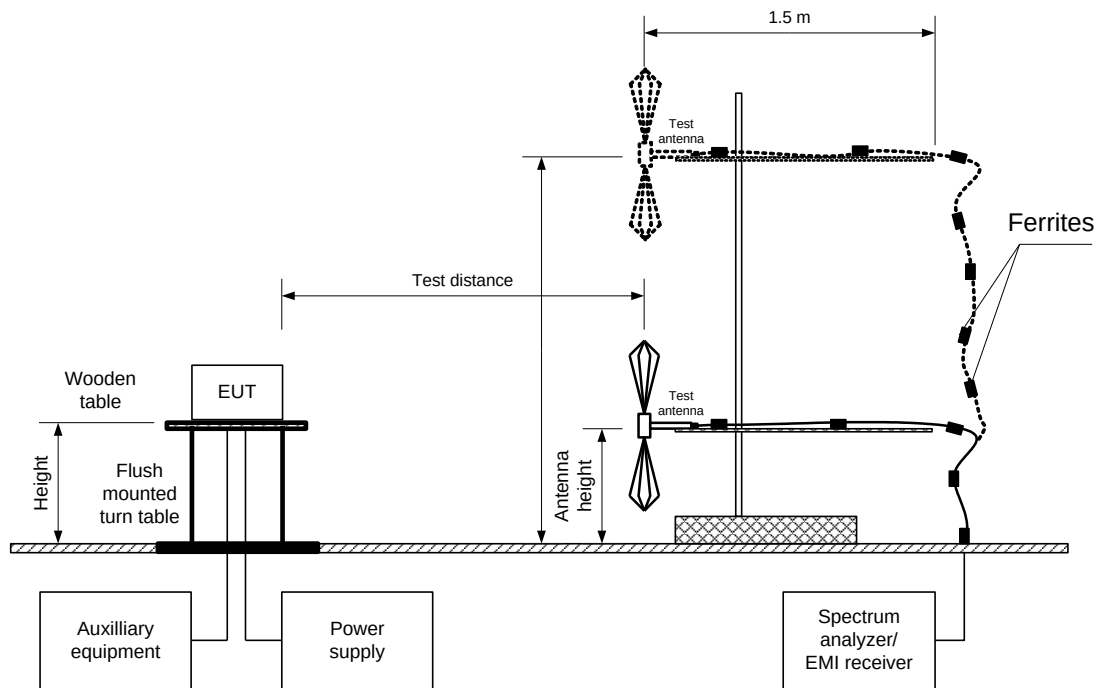
7.1.4.5 The worst test results (peak power in any 1MHz) were recorded in Table 7.1.2 and shown in the associated plots.

7.1.4.6 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 2.1049, Occupied bandwidth	
Test procedure:		ANSI C63.10, Section 9.3	
Test mode:		Verdict: PASS	
Date(s):			
26-Jan-26			
Temperature: 24 °C	Relative Humidity: 52 %	Air Pressure: 1010 hPa	Power: 12 VDC
Remarks:			

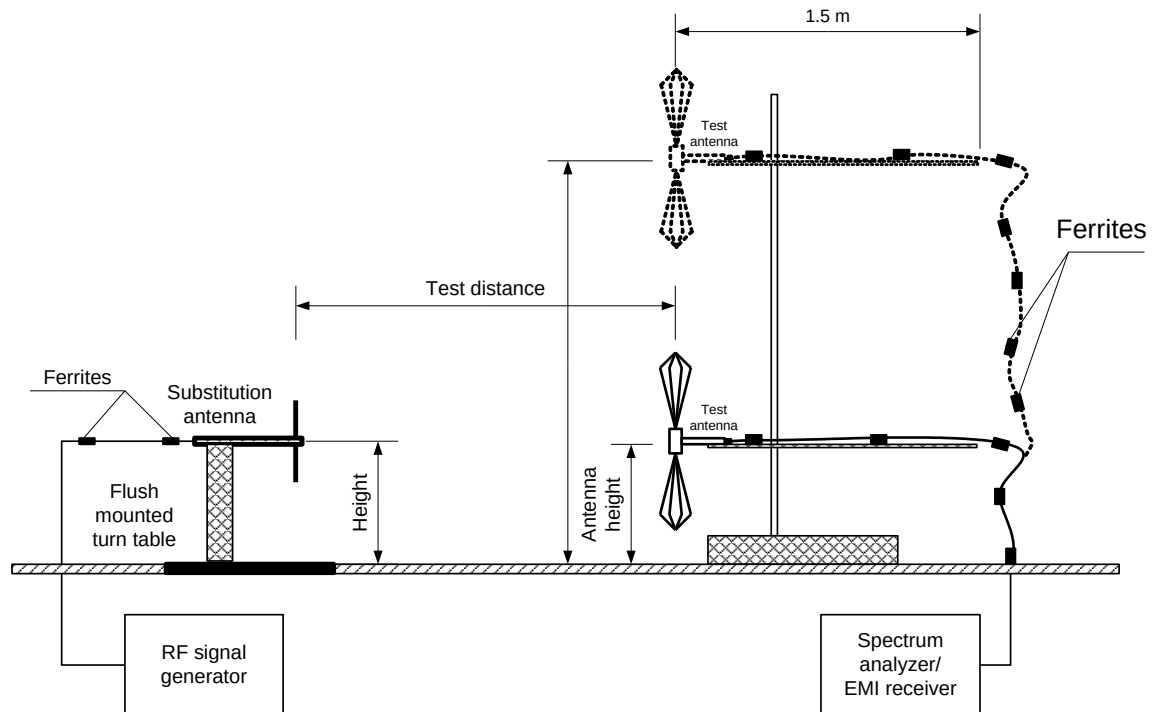
Figure 7.1.1 Setup for RF peak output power measurements





Test specification:		Section 2.1049, Occupied bandwidth	
Test procedure:		ANSI C63.10, Section 9.3	
Test mode:		Verdict: PASS	
Date(s):			
26-Jan-26			
Temperature: 24 °C	Relative Humidity: 52 %	Air Pressure: 1010 hPa	Power: 12 VDC
Remarks:			

Figure 7.1.2 Setup for substitution measurements





Test specification: Section 2.1049, Occupied bandwidth			
Test procedure: ANSI C63.10, Section 9.3			
Test mode: Compliance		Verdict: PASS	
Date(s): 26-Jan-26			
Temperature: 24 °C	Relative Humidity: 52 %	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
76.22000	126.94	8.77	24.0	N/A	32.77	55	-22.23	Pass

*- Margin = EIRP – specification limit.

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
76.22000	126.00	7.83	24.0	N/A	31.83	50	-18.17	Pass

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

**- Margin = EIRP – specification limit.

Reference numbers of test equipment used

HL 3291	HL 0771	HL 5380	HL 4856	HL 3293	HL 5409	HL 5376	HL 5371
HL 5986							

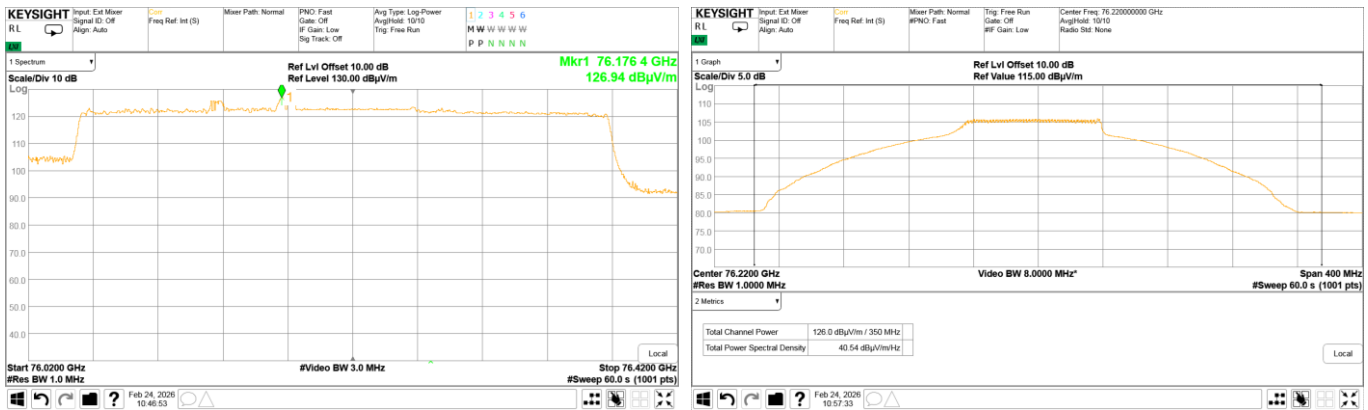
Full description is given in Appendix A.



HERMON LABORATORIES

Test specification:		Section 2.1049, Occupied bandwidth	
Test procedure:		ANSI C63.10, Section 9.3	
Test mode:		Verdict: PASS	
Date(s):			
26-Jan-26			
Temperature: 24 °C	Relative Humidity: 52 %	Air Pressure: 1010 hPa	Power: 12 VDC
Remarks:			

Plot 7.1.1 RF peak output power test results



Reference level offset 10 dB is for attenuator 10 dB between antenna and smart mixer HL5380



Test specification: Section 2.1049, Occupied bandwidth			
Test procedure: ANSI C63.10, Section 9.3			
Test mode: Compliance		Verdict: PASS	
Date(s): 26-Jan-26			
Temperature: 24 °C	Relative Humidity: 52 %	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.

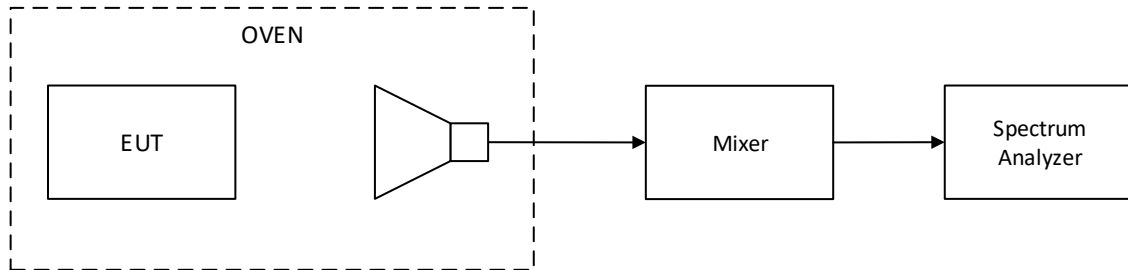
7.2.2.3 The occupied bandwidth was measured with spectrum analyzer (the 99% occupied bandwidth function of the spectrum analyzer was used).

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):			
26-Jan-26			
Temperature: 24 °C	Relative Humidity: 52 %	Air Pressure: 1010 hPa	Power: 12 VDC
Remarks:			

Figure 7.2.1 Setup for occupied bandwidth measurements





HERMON LABORATORIES

Test specification: Section 2.1049, Occupied bandwidth			
Test procedure: ANSI C63.10, Section 9.3			
Test mode: Compliance		Verdict: PASS	
Date(s): 26-Jan-26			
Temperature: 24 °C	Relative Humidity: 52 %	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
76.220	316.71	76000 - 81000	Pass

Reference numbers of test equipment used

HL 5376	HL 5380	HL 0771	HL 3291				
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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): 01-Feb-26			
Temperature: 23 °C	Relative Humidity: 52 %	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 7.2.1.

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 7.2.1, 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).

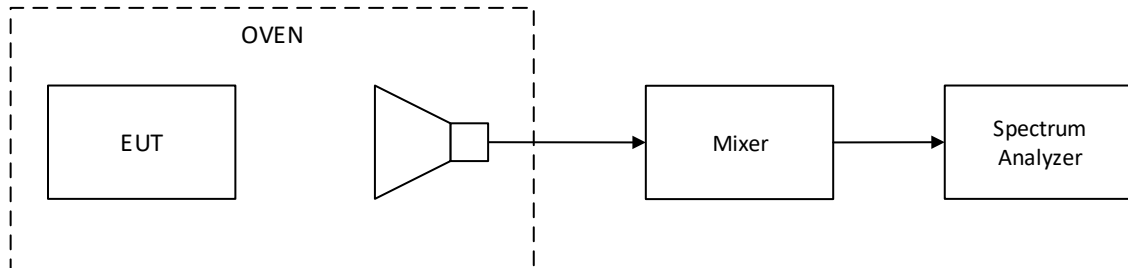
7.3.2.4 The occupied bandwidth was measured with spectrum analyzer (the 99% occupied bandwidth function of the spectrum analyzer was used) operate over the temperature range -20 to +50 degrees Celsius with an input voltage variation of 85% to 115% of rated input voltage.

7.3.2.5 The test results were recorded in Table 7.2.2 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: Compliance		Verdict: PASS	
Date(s): 01-Feb-26			
Temperature: 23 °C	Relative Humidity: 52 %	Air Pressure: 1010 hPa	Power: 12 VDC
Remarks:			

Figure 7.3.1 Setup for Frequency stability measurements





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): 01-Feb-26			
Temperature: 23 °C	Relative Humidity: 52 %	Air Pressure: 1010 hPa	Power: 12 VDC
Remarks:			

Table 7.3.2 Frequency stability test results

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	310.23	76064.885	76375.115	Pass
	40	12.0	312.33	76063.835	76376.165	Pass
	30	12.0	310.51	76064.745	76375.255	Pass
	20	10.2	312.93	76063.535	76376.465	Pass
	20	12.0	313.47	76063.265	76376.735	Pass
	20	13.8	311.72	76064.140	76375.860	Pass
	10	12.0	312.79	76063.605	76376.395	Pass
	0	12.0	312.61	76063.695	76376.305	Pass
	-10	12.0	314.37	76062.815	76377.185	Pass
	-20	12.0	311.86	76064.070	76375.930	Pass
	-30	12.0	310.76	76064.620	76375.380	Pass

Reference numbers of test equipment used

HL 5376	HL 0771	HL 3291	HL 5380	HL 3286			
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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):		28-Jan-26 – 09-Feb-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):		28-Jan-26 – 09-Feb-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

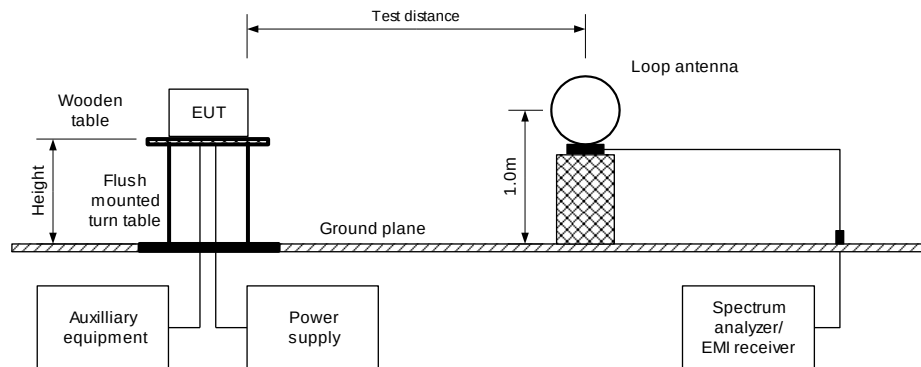
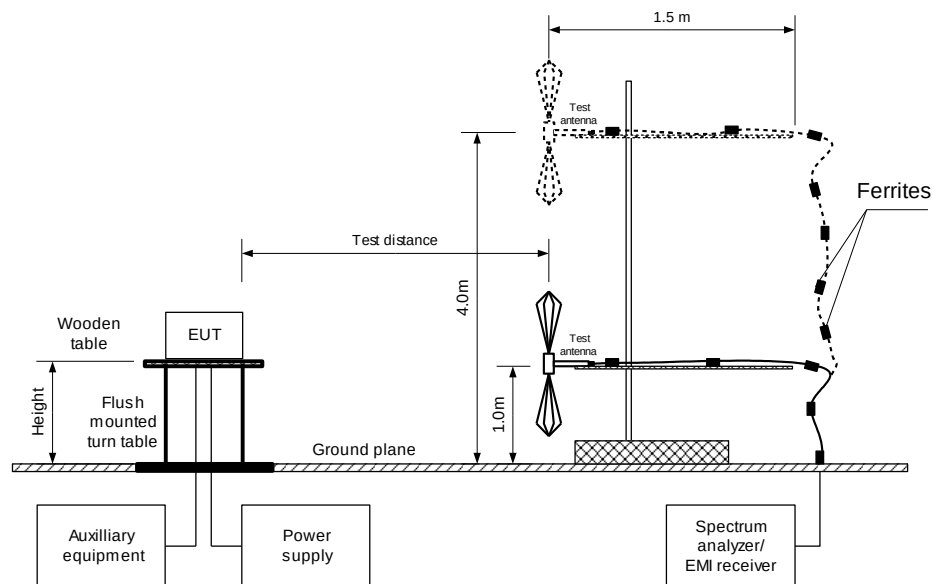


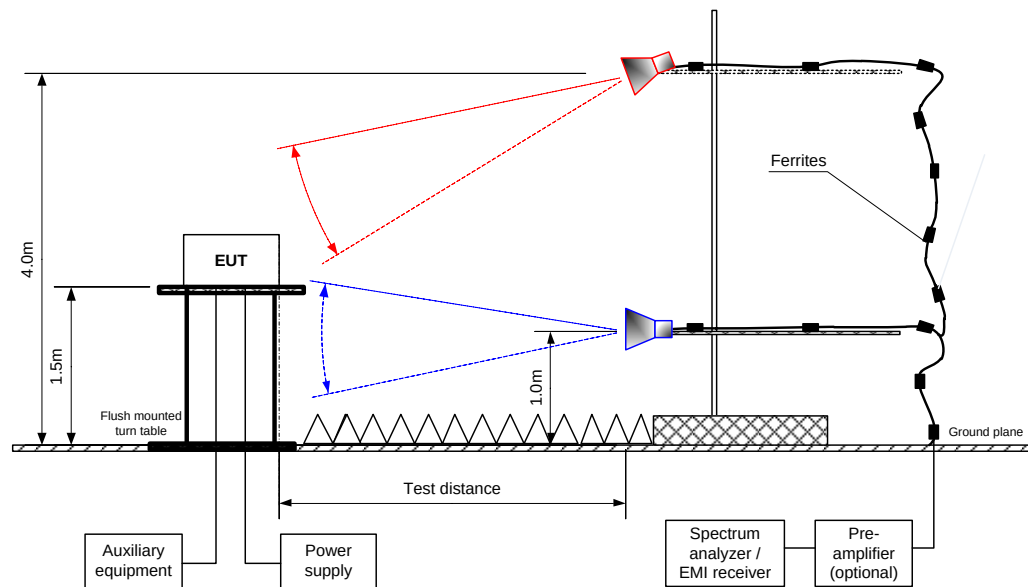
Figure 7.4.2 Setup for spurious emission field strength measurements above 30 MHz





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):		28-Jan-26 – 09-Feb-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





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):		28-Jan-26 – 09-Feb-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*				
450.648	32.26	24.83	46.00	-21.17	Vertical	1.82	-159	Pass
499.977	40.77	37.56	46.00	-8.44	Vertical	1.00	123	
550.566	35.44	27.70	46.00	-18.30	Vertical	1.41	-172	
624.973	33.73	27.63	46.00	-18.37	Vertical	1.00	-87	
736.100	36.97	32.18	46.00	-13.82	Horizontal	1.02	148	



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):		28-Jan-26 – 09-Feb-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			Average			Antenna polarization	Antenna height, m	Turn-table position**, degrees	Verdict
	Measured emission, dB(μV/m)	Limit, dB(μV/m)	Margin, dB*	Measured emission, dB(μV/m)	Limit, dB(μV/m)	Margin, dB*				
1250.090	42.65	74.00	-31.35	39.27	54.00	-14.73	Horizontal	1.20	152	Pass
1450.180	41.40	74.00	-32.60	38.01	54.00	-15.99	Horizontal	1.02	156	
2750.120	43.34	74.00	-30.66	40.09	54.00	-13.91	Vertical	1.02	149	
3249.920	42.11	74.00	-31.89	38.23	54.00	-15.77	Vertical	1.04	-126	
3749.780	46.12	74.00	-27.88	42.75	54.00	-11.25	Horizontal	1.55	-167	

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, dBm	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 0771	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	HL 4339	HL 0770

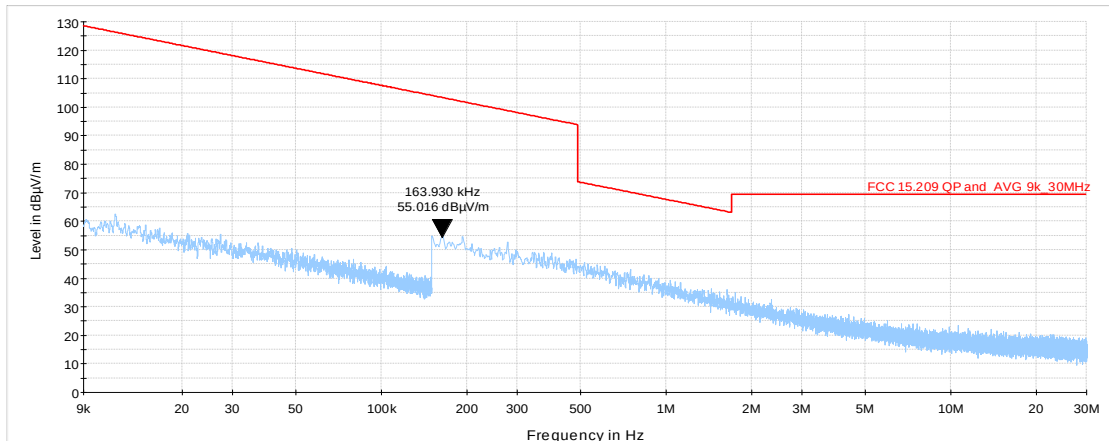
Full description is given in Appendix A.



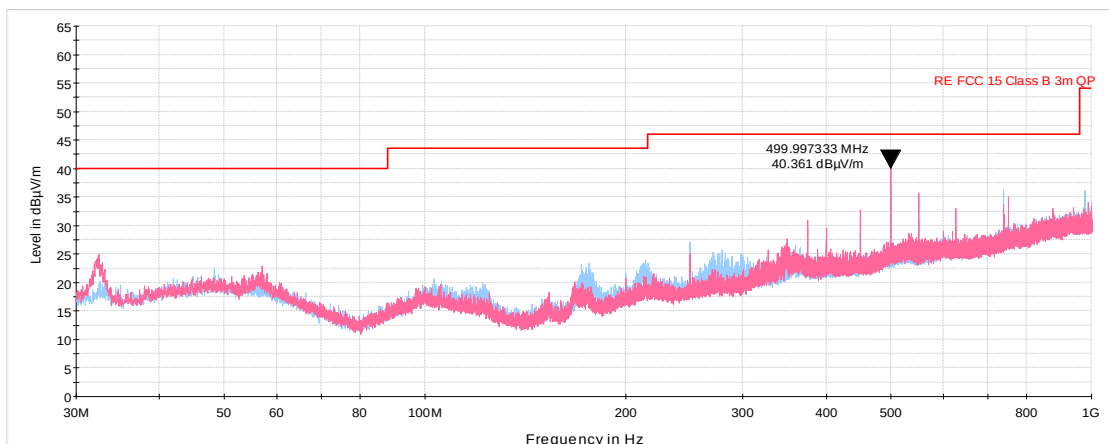
HERMON LABORATORIES

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):		28-Jan-26 – 09-Feb-26	
Temperature: 23 °C	Relative Humidity: 47 %	Air Pressure: 1012 hPa	Power: 12.0 VDC
Remarks:			

Plot 7.4.1 Unwanted emission test results in 0.009 – 30 MHz range



Plot 7.4.2 Unwanted emission test results in 30 – 1000 MHz range

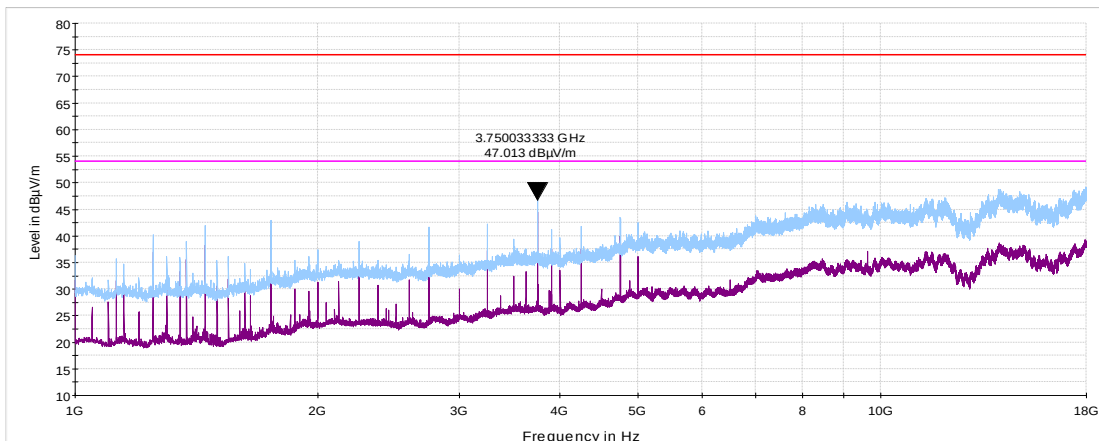




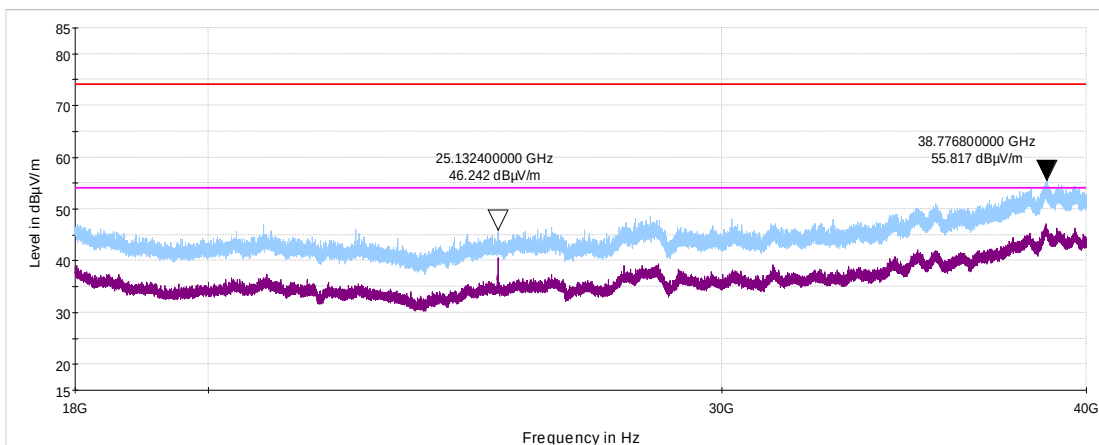
HERMON LABORATORIES

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):		28-Jan-26 – 09-Feb-26	
Temperature: 23 °C	Relative Humidity: 47 %	Air Pressure: 1012 hPa	Power: 12.0 VDC
Remarks:			

Plot 7.4.3 Unwanted emission test results in 1.0 – 18 GHz range



Plot 7.4.4 Unwanted emission test results in 18 – 40 GHz range





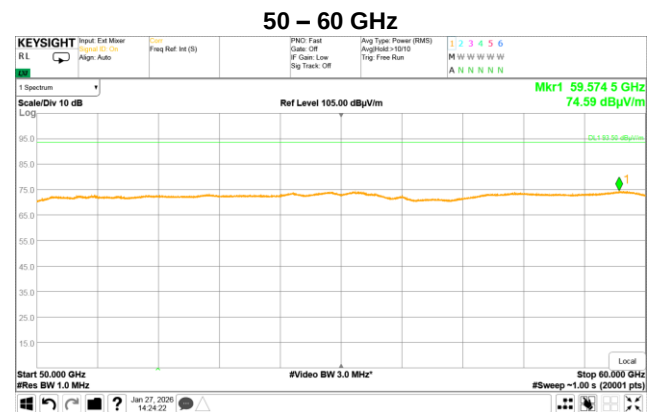
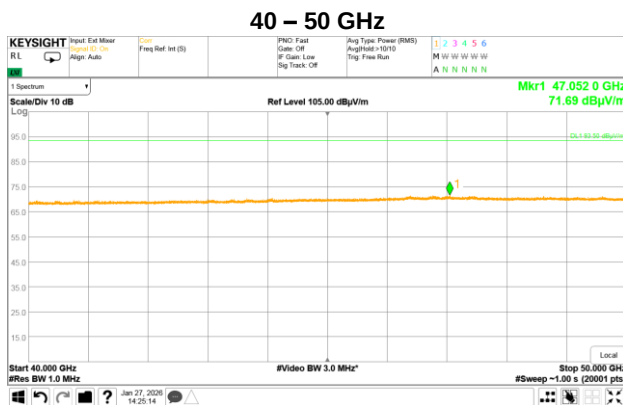
HERMON LABORATORIES

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):		28-Jan-26 – 09-Feb-26	
Temperature: 23 °C	Relative Humidity: 47 %	Air Pressure: 1012 hPa	Power: 12.0 VDC
Remarks:			

Plot 7.4.5 Unwanted emission test results in 40.0 – 60 GHz range

DISTANCE
DETECTOR:
ANTENNA POLARIZATION:

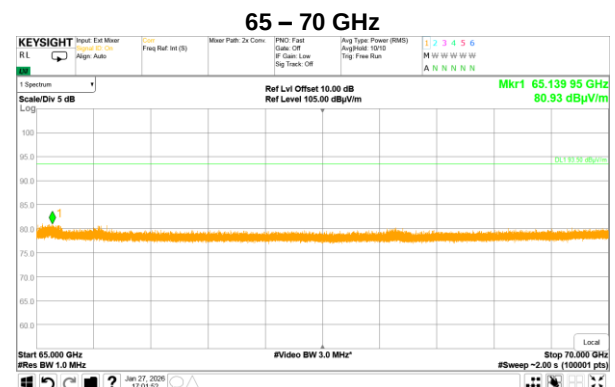
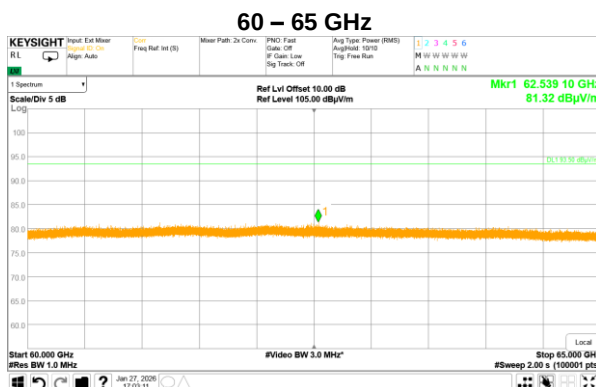
3 m (limit 93.5 dBuV/m)
Average
Vertical and Horizontal



Plot 7.4.6 Unwanted emission test results in 60 – 70 GHz range

DISTANCE
DETECTOR:
ANTENNA POLARIZATION:

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





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):		28-Jan-26 – 09-Feb-26	
Temperature: 23 °C	Relative Humidity: 47 %	Air Pressure: 1012 hPa	Power: 12.0 VDC
Remarks:			

Plot 7.4.7 Unwanted emission test results in 70 – 90 GHz range

DISTANCE

3 m (limit 93.5 dBuV/m)

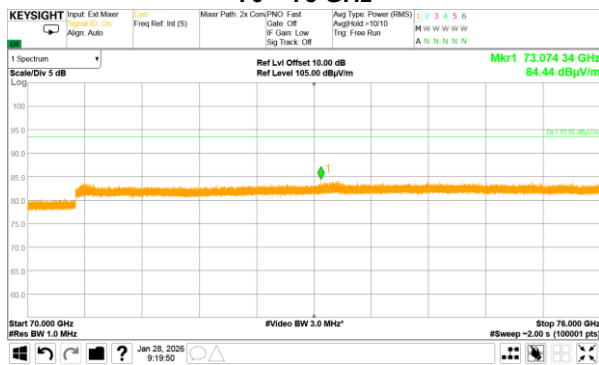
DETECTOR:

Average

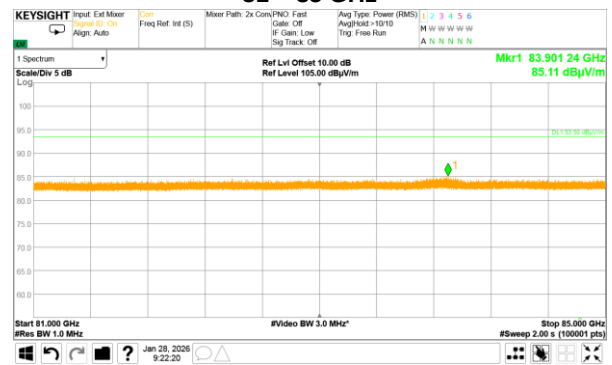
ANTENNA POLARIZATION:

Vertical and Horizontal

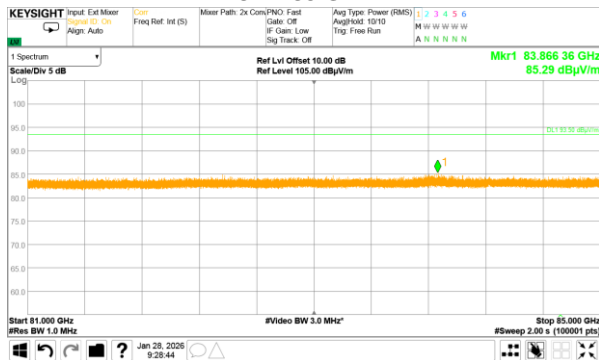
70 – 76 GHz



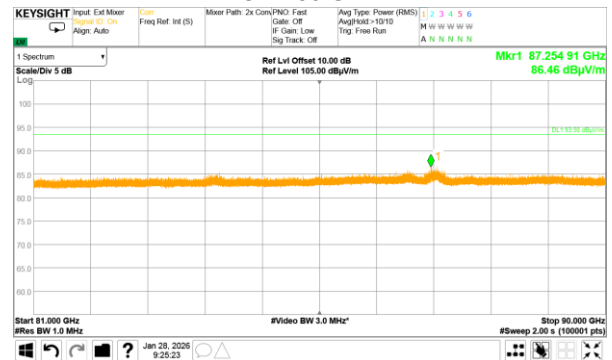
81 – 85 GHz



81 – 85 GHz



81 – 90 GHz





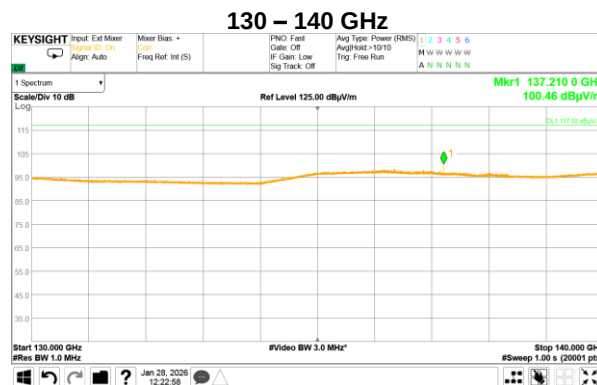
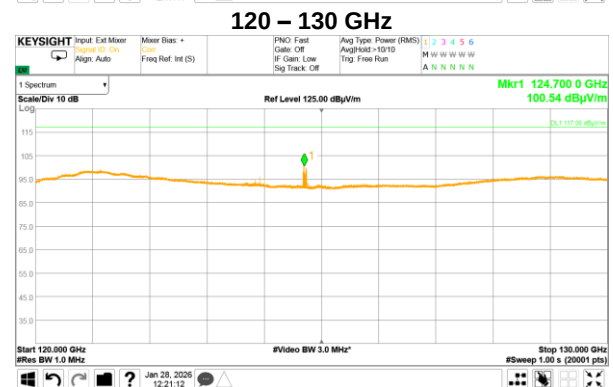
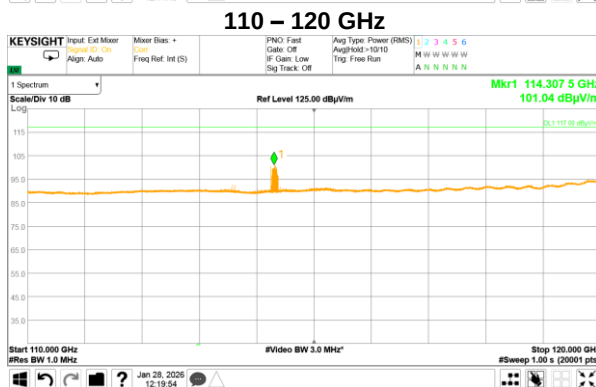
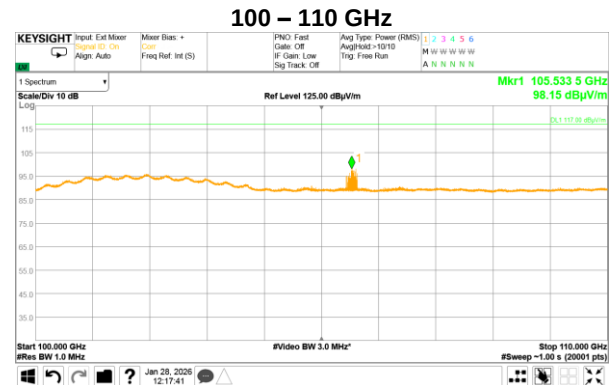
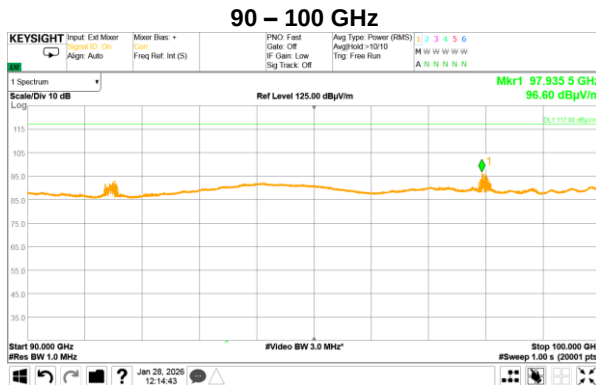
HERMON LABORATORIES

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):		28-Jan-26 – 09-Feb-26	
Temperature: 23 °C	Relative Humidity: 47 %	Air Pressure: 1012 hPa	Power: 12.0 VDC
Remarks:			

Plot 7.4.8 Unwanted emission test results in 90.0 – 140.0 GHz range

DISTANCE
DETECTOR:
ANTENNA POLARIZATION:

0.2 m (limit 117 dBuV/m)*
Average
Vertical and Horizontal



*- The limit for 0.2m 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.



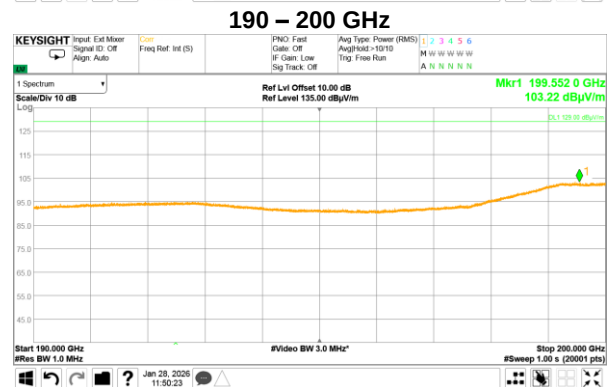
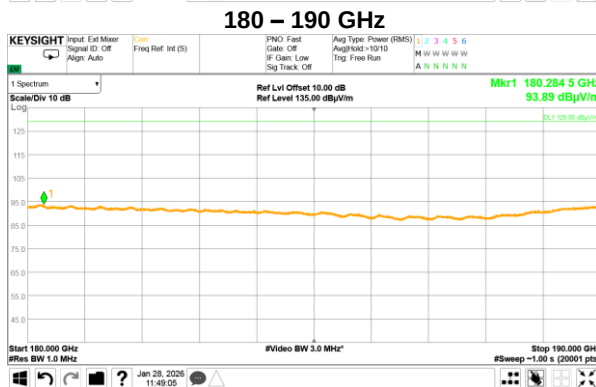
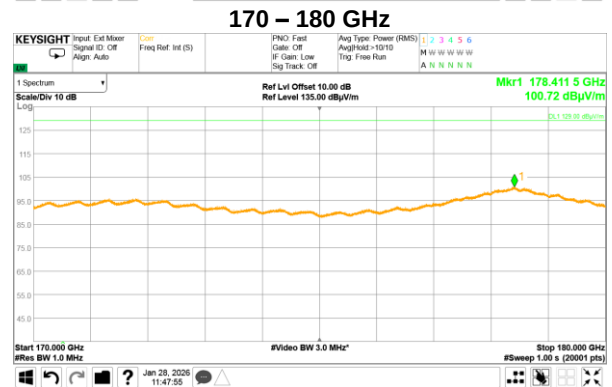
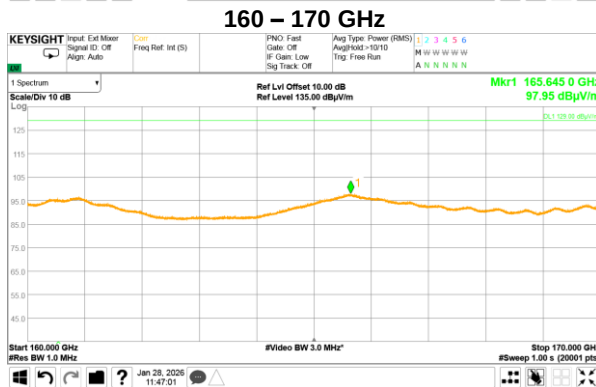
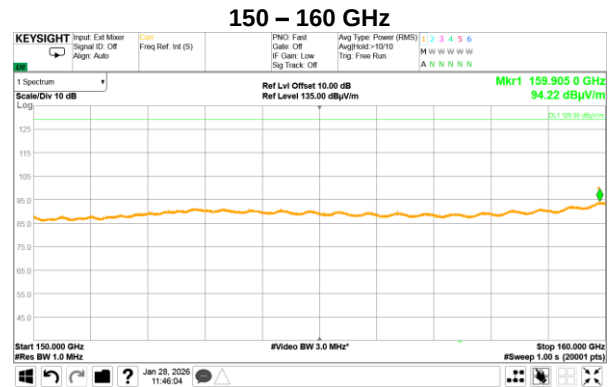
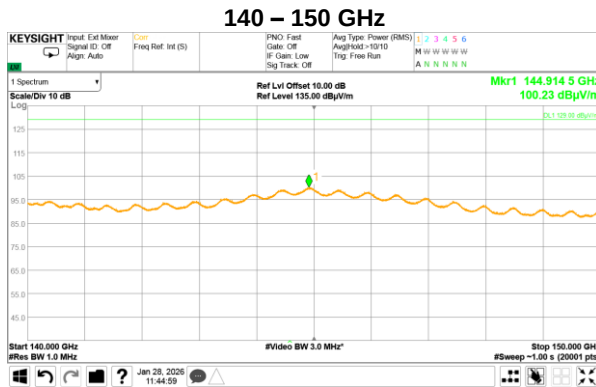
HERMON LABORATORIES

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):		28-Jan-26 – 09-Feb-26	
Temperature: 23 °C	Relative Humidity: 47 %	Air Pressure: 1012 hPa	Power: 12.0 VDC
Remarks:			

Plot 7.4.9 Unwanted emission test results in 140.0 – 200.0 GHz range

DISTANCE
DETECTOR:
ANTENNA POLARIZATION:

0.05 m (limit 129 dBuV/m)*
Average
Vertical and Horizontal



*- The limit for 0.05m 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

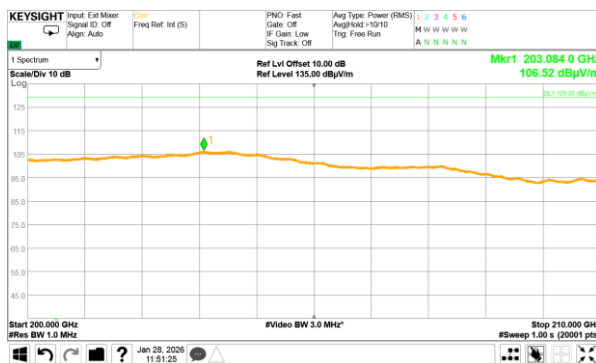
Test specification:		Sections 2.1053 and 95.3379 (a) (1) and 95.3379 (a) (2), Field Strength of Spurious Radiation	
Test procedure:		ANSI C63.10, Sections 9.12, 9.13	
Test mode:		Compliance	Verdict: PASS
Date(s):		28-Jan-26 – 09-Feb-26	
Temperature: 23 °C	Relative Humidity: 47 %	Air Pressure: 1012 hPa	Power: 12.0 VDC
Remarks:			

Plot 7.4.10 Unwanted emission test results in 200.0 – 220.0 GHz range

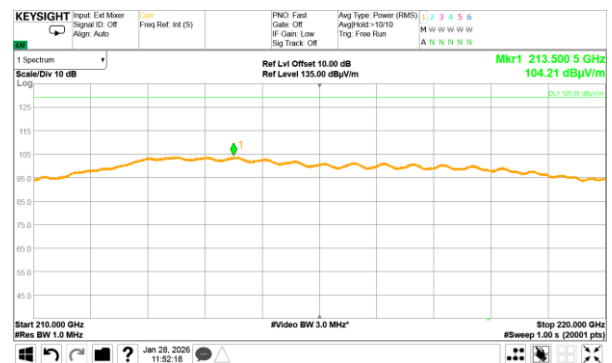
DISTANCE
DETECTOR:
ANTENNA POLARIZATION:

0.05 m (limit 129 dBuV/m)*
Average
Vertical and Horizontal

200 – 210 GHz



210 – 220 GHz



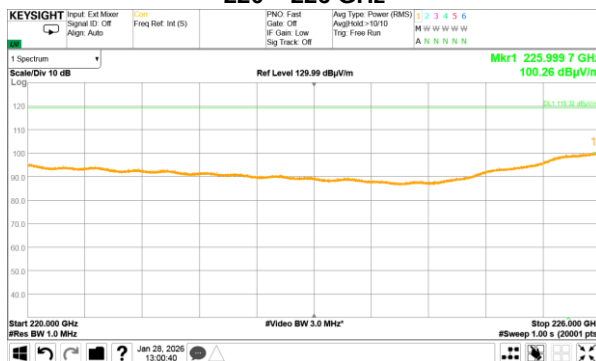
*- The limit for 0.05m test distance was calculated using the inverse distance extrapolation factor as follows:
$$\text{Lim}_{S_2} = \text{Lim}_{S_1} + 20 \log (S_1/S_2)$$
, where S_1 and S_2 – standard defined and test distance respectively in meters.

Plot 7.4.11 Unwanted emission test results in 220.0 – 231.0 GHz range

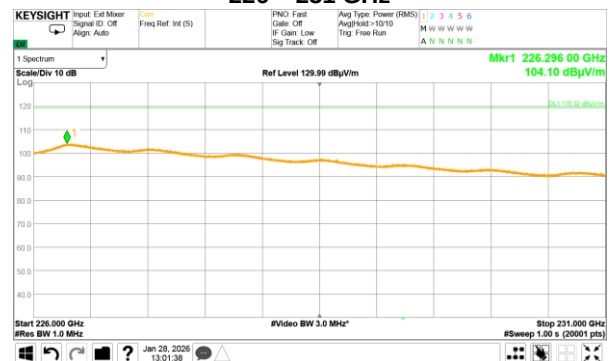
DISTANCE
DETECTOR:
ANTENNA POLARIZATION:

0.2 m (limit 119.32 dBuV/m)*
Average
Vertical and Horizontal

220 – 226 GHz



226 – 231 GHz



*- The limit for 0.2m test distance was calculated using the inverse distance extrapolation factor as follows:
$$\text{Lim}_{S_2} = \text{Lim}_{S_1} + 20 \log (S_1/S_2)$$
, where S_1 and S_2 – 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	18-Feb-25	18-Feb-26
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
3286	Temperature Chamber, (-50 to +170) °C	Thermotron	EL-8-CH-1-1-CO2	21-9048	18-Nov-25	18-Nov-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
3903	Microwave Cable Assembly, 40.0 GHz, 1.5 m, SMA/SMA	Huber-Suhner	SUCOFL EX 102A	1226/2A	10-May-25	10-May-26
4023	Diplexer for use OML mixers with Agilent spectrum analyzer	Oleson Microwave Labs	DPL.26	NA	20-Feb-25	20-Feb-26
4339	High pass Filter, 50 Ohm, 1000 to 18000 MHz, SMA-FM / SMA-M	Micro-Tronics	HPM50115-02	001	05-Jun-25	05-Jun-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
5380	Waveguide Harmonic Mixer 55-90GHz	Keysight Technologies	M1971E	MY561302 39	14-Mar-25	14-Mar-27
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	20-Feb-25	20-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 A/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 conducted at antenna connector	± 1.7 dB
Carrier power radiated (substitution method)	± 4.5 dB
Occupied bandwidth	$\pm 8\%$
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
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)
Transient frequency behaviour	187 Hz $\pm 13.9\%$
Dynamic frequency selection	$\pm 13.9\%$
Duty cycle, timing (Tx ON / OFF) and average factor measurements	$\pm 1.0\%$

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 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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Telephone: +972 4628 8001
Fax: +972 4628 8277
e-mail: mail@hermonlabs.com
website: www.hermonlabs.com

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

12 APPENDIX E Specification references

FCC 47CFR part 95: 2024	Personal Radio Services
FCC 47CFR part 2: 2024	General Rules and Regulations
ANSI C63.10: 2013	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