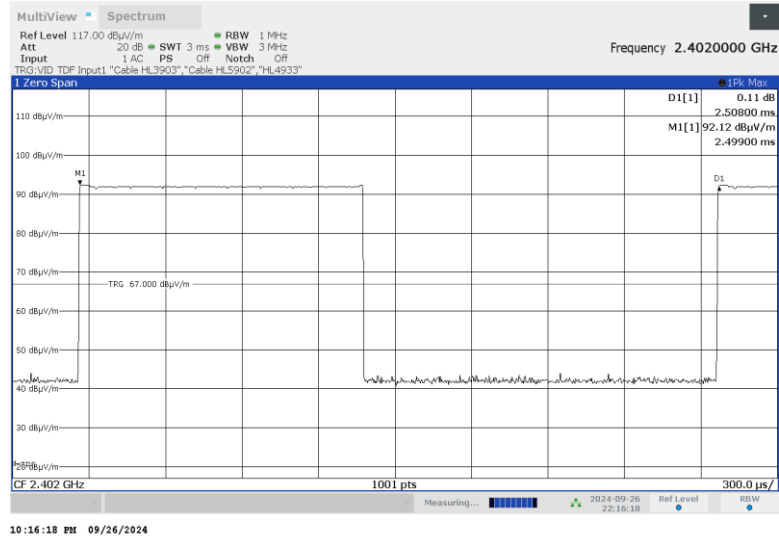
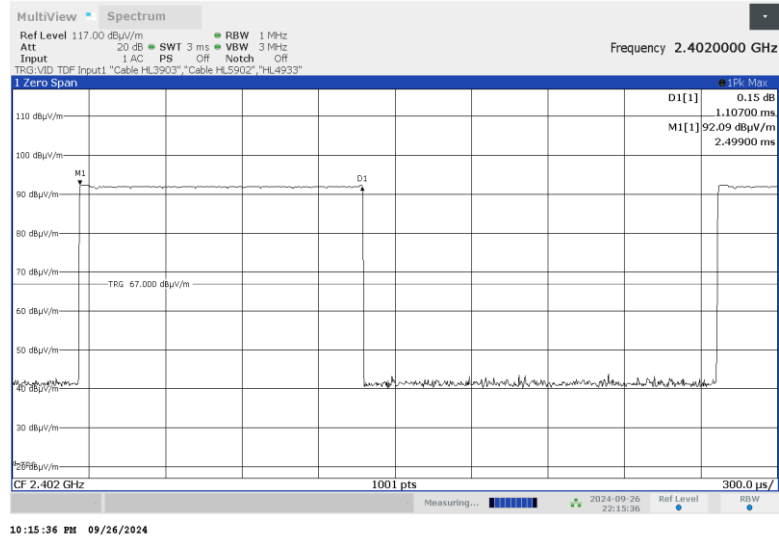




HERMON LABORATORIES

Test specification: Section 15.247(d) / RSS-247 section 5.5, Band edge emissions			
Test procedure: ANSI C63.10 section 11.12.1			
Test mode: Compliance		Verdict: PASS	
Date(s): 22-Sep-24			
Temperature: 24 °C	Relative Humidity: 42 %	Air Pressure: 1005 hPa	Power: 25.5 VDC
Remarks:			

Plot 7.3.16 Transmission pulse duration and period





Test specification: Section 15.247(d) / RSS-247 section 5.5, Band edge emissions			
Test procedure: ANSI C63.10 section 11.12.1			
Test mode: Compliance		Verdict: PASS	
Date(s): 22-Sep-24			
Temperature: 24 °C	Relative Humidity: 42 %	Air Pressure: 1005 hPa	Power: 25.5 VDC
Remarks:			

7.4 Band edge radiated emissions

7.4.1 General

This test was performed to measure emissions, radiated from the EUT at the assigned frequency band edges. Specification test limits are given in Table 7.4.1.

Table 7.4.1 Band edge emission limits

Output power	Assigned frequency, MHz	Attenuation below carrier*, dBc	Field strength at 3 m within restricted bands, dB(μV/m)	
			Peak	Average
Peak	2400.0 – 2483.5	20.0	74.0	54.0

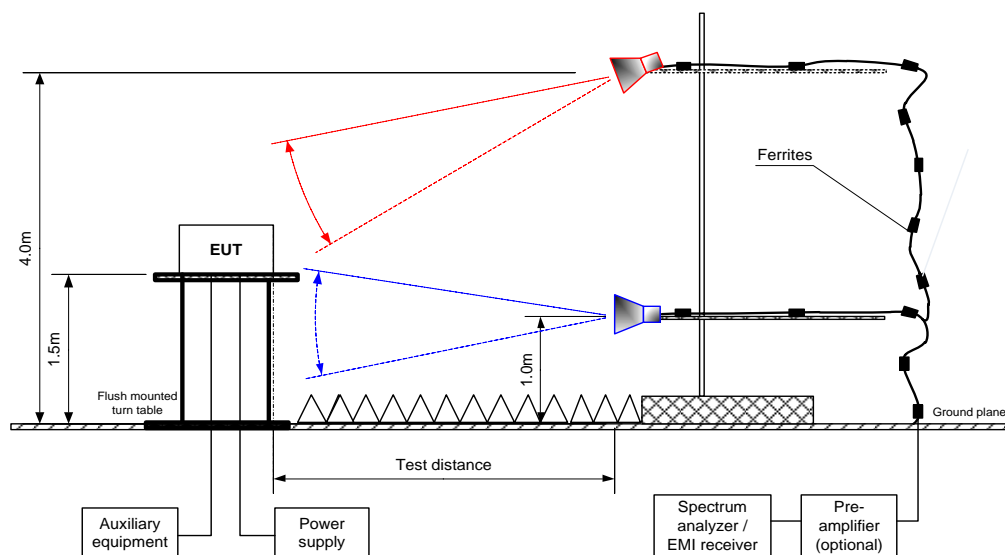
* - Band edge emission limit is provided in terms of attenuation below the peak of modulated carrier measured with the same resolution bandwidth.

7.4.2 Test procedure

- 7.4.2.1** The EUT was set up as shown in Figure 7.4.1, energized normally modulated at the maximum data rate and its proper operation was checked.
- 7.4.2.2** The EUT was adjusted to produce maximum available to end user RF output power at the lowest carrier frequency.
- 7.4.2.3** The spectrum analyzer span was set to capture the carrier frequency and associated modulation products. The resolution bandwidth was set wider than 1 % of the frequency span.
- 7.4.2.4** The spectrum analyzer was set in max hold mode and allowed trace to stabilize. The highest emission level within the authorized band was measured.
- 7.4.2.5** The maximum band edge emission and modulation product outside of the band were measured as provided in Table 7.4.2 and associated plots and referenced to the highest emission level measured within the authorized band.
- 7.4.2.6** The above procedure was repeated with the EUT adjusted to produce maximum RF output power at the highest carrier frequency.

Test specification: Section 15.247(d) / RSS-247 section 5.5, Band edge emissions			
Test procedure: ANSI C63.10 section 11.12.1			
Test mode: Compliance		Verdict: PASS	
Date(s): 22-Sep-24			
Temperature: 24 °C	Relative Humidity: 42 %	Air Pressure: 1005 hPa	Power: 25.5 VDC
Remarks:			

Figure 7.4.1 Band edge emission test setup





Test specification: Section 15.247(d) / RSS-247 section 5.5, Band edge emissions			
Test procedure: ANSI C63.10 section 11.12.1			
Test mode: Compliance		Verdict: PASS	
Date(s): 22-Sep-24			
Temperature: 24 °C	Relative Humidity: 42 %	Air Pressure: 1005 hPa	Power: 25.5 VDC
Remarks:			

Table 7.4.2 Band edge emission outside restricted bands test results

ASSIGNED FREQUENCY RANGE: 2400 – 2483.5 MHz
 DETECTOR USED: Peak
 MODULATION: GFSK
 BIT RATE: 2 Mbps
 RESOLUTION BANDWIDTH: 100 kHz

Frequency, MHz	Band edge emission, dBuV/m	Emission at carrier, dBuV/m	Attenuation below carrier, dBc	Limit, dBc	Margin, dB*	Verdict
2400	65.17	97.17	32.00	20	12	Pass

*- Margin = Attenuation below carrier – specification limit.

Table 7.4.3 Band edge emission inside restricted bands test results

ASSIGNED FREQUENCY RANGE: 2400.0 – 2483.5 MHz
 DETECTOR USED: Peak
 MODULATION: GFSK
 BIT RATE: 2 Mbps
 RESOLUTION BANDWIDTH: 1000 kHz

Frequency, MHz	Peak field strength			Average field strength			Verdict
	Measured, dB(μV/m)	Limit, dB(μV/m)	Margin, dB*	Measured Peak, dB(μV/m)	Limit AVR, dB(μV/m)	Margin, dB*	
2389.5	45.43	74.0	-28.57	45.43	54.0	-8.57	Pass
2483.5	59.24	74.0	-14.76	53.39	54.0	-0.61	Pass

*- Margin = Attenuation below carrier – specification limit.

Reference numbers of test equipment used

HL 3903	HL 4360	HL 4933	HL 5902				
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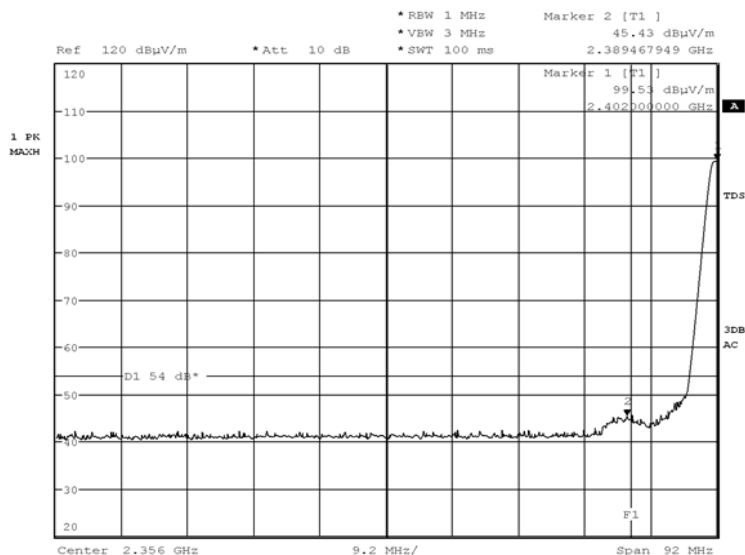
Full description is given in Appendix A.



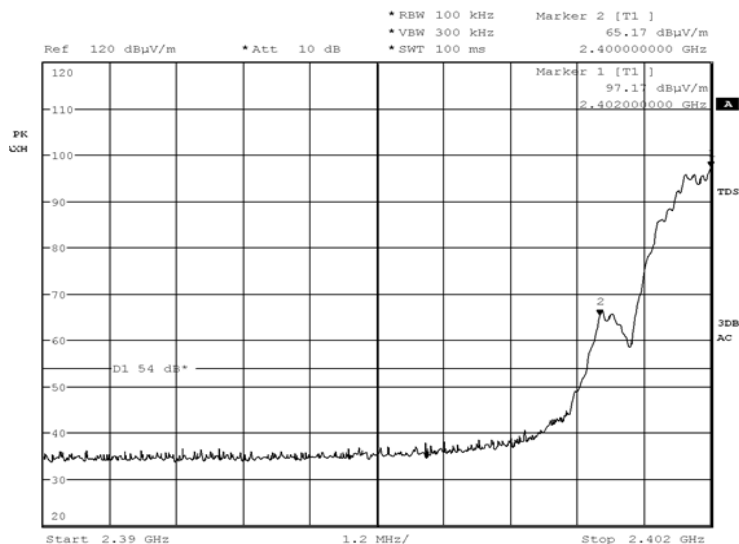
HERMON LABORATORIES

Test specification: Section 15.247(d) / RSS-247 section 5.5, Band edge emissions			
Test procedure: ANSI C63.10 section 11.12.1			
Test mode: Compliance		Verdict: PASS	
Date(s): 22-Sep-24			
Temperature: 24 °C	Relative Humidity: 42 %	Air Pressure: 1005 hPa	Power: 25.5 VDC
Remarks:			

Plot 7.4.1 The highest emission level within restricted band at low carrier frequency



Plot 7.4.1 The highest emission level outside restricted band at low carrier frequency

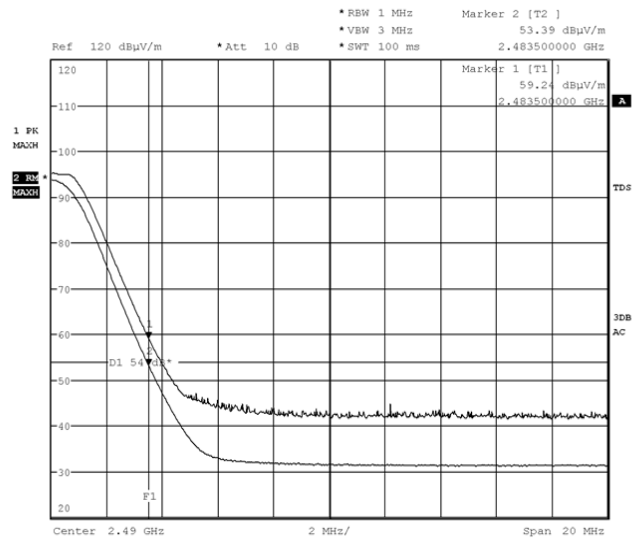




HERMON LABORATORIES

Test specification: Section 15.247(d) / RSS-247 section 5.5, Band edge emissions			
Test procedure: ANSI C63.10 section 11.12.1			
Test mode: Compliance		Verdict: PASS	
Date(s): 22-Sep-24			
Temperature: 24 °C	Relative Humidity: 42 %	Air Pressure: 1005 hPa	Power: 25.5 VDC
Remarks:			

Plot 7.4.3 The highest emission level within restricted band at high carrier frequency





Test specification: Section 15.247(e) / RSS-247 section 5.2(2), Maximum power spectral density			
Test procedure: ANSI C63.10 section 11.10.2			
Test mode: Compliance		Verdict: PASS	
Date(s): 10-Oct-24			
Temperature: 24 °C	Relative Humidity: 45 %	Air Pressure: 1011 hPa	Power: 25.5 VDC
Remarks:			

7.5 Peak spectral power density

7.5.1 General

This test was performed to measure the peak spectral power density radiated by the transmitter RF antenna. Specification test limits are given in Table 7.5.1.

Table 7.5.1 Peak spectral power density limits

Assigned frequency range, MHz	Measurement bandwidth, kHz	Peak spectral power density, dBm	Equivalent Peak spectral power density limit @ 3m, dB(μV/m)*
902.0 – 928.0	3.0	8.0	103.2
2400.0 – 2483.5			
5725.0 – 5850.0			

* - Equivalent Peak spectral power density limit was calculated from the peak spectral power density as follows: $E = \sqrt{30 \times P} / r$, where P is peak spectral power density and r is antenna to EUT distance in meters.

7.5.2 Test procedure for field strength measurements

7.5.2.1 The EUT was set up as shown in Figure 7.5.1, energized and its proper operation was checked.

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

7.5.2.3 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° and the measuring antenna height was swept in both vertical and horizontal polarizations.

7.5.2.4 The frequency span of spectrum analyzer was set to capture the entire 6 dB band of the transmitter, in peak hold mode with resolution bandwidth set to 3.0 kHz, video bandwidth wider than resolution bandwidth, auto sweep time and sufficient number of sweeps was allowed for trace stabilization. The spectrum lines spacing was verified to be wider than 3 kHz. Otherwise the resolution bandwidth was reduced until individual spectrum lines were resolved and the power of individual spectrum lines was integrated over 3 kHz band.

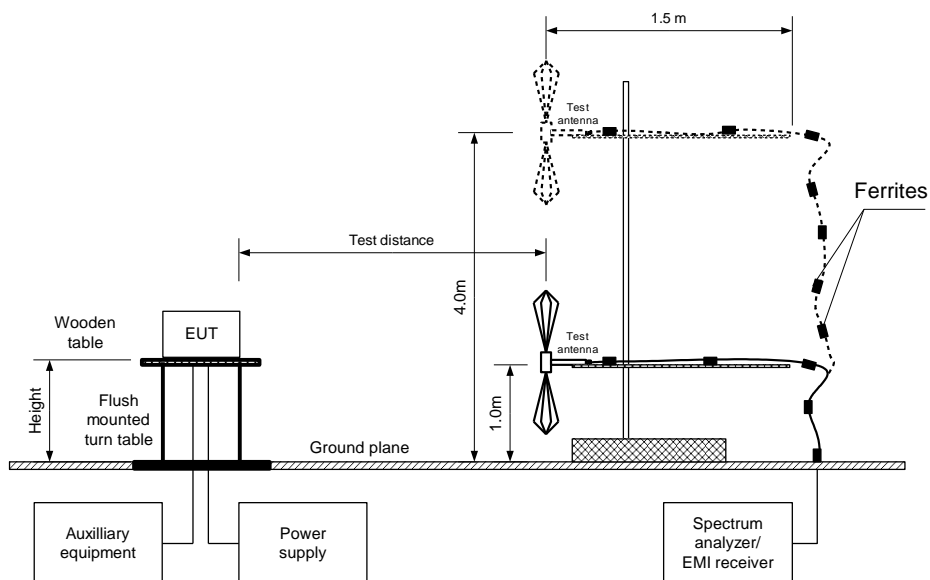
7.5.2.5 The peak of emission was zoomed with span set just wide enough to capture the emission peak area and sweep time was set equal to span width divided by resolution bandwidth. Spectrum analyzer was set in peak hold mode, sufficient number of sweeps was allowed for trace stabilization and peak spectral power density was measured as provided in Table 7.5.2 and associated plots.



HERMON LABORATORIES

Test specification: Section 15.247(e) / RSS-247 section 5.2(2), Maximum power spectral density			
Test procedure: ANSI C63.10 section 11.10.2			
Test mode: Compliance		Verdict: PASS	
Date(s): 10-Oct-24			
Temperature: 24 °C	Relative Humidity: 45 %	Air Pressure: 1011 hPa	Power: 25.5 VDC
Remarks:			

Figure 7.5.1 Setup for carrier field strength measurements





Test specification: Section 15.247(e) / RSS-247 section 5.2(2), Maximum power spectral density			
Test procedure: ANSI C63.10 section 11.10.2			
Test mode: Compliance		Verdict: PASS	
Date(s): 10-Oct-24			
Temperature: 24 °C	Relative Humidity: 45 %	Air Pressure: 1011 hPa	Power: 25.5 VDC
Remarks:			

Table 7.5.2 Field strength measurement of peak spectral power density

ASSIGNED FREQUENCY: 2400 – 2483.5 MHz
 TEST DISTANCE: 3 m
 TEST SITE: Semi anechoic chamber
 EUT HEIGHT: 1.5 m
 DETECTOR USED: Peak
 TEST ANTENNA TYPE: Double ridged guide (above 1000 MHz)
 MODULATION: GFSK
 BIT RATE: 1 Mbps

Frequency, MHz	Peak spectral power density, dB(μV/m)	EUT antenna gain, dBi	Limit, dB(μV/m)	Margin, dB*	Antenna polarization	Antenna height, m	Turn-table position**, degrees	Verdict
2402	77.20	1.95	103.2	-26.00	Horizontal	2.10	-75	Pass
2440	77.02	1.95	103.2	-26.18	Horizontal	1.90	-75	Pass
2480	76.84	1.95	103.2	-26.36	Horizontal	2.38	-82	Pass

BIT RATE: 2Mbps

Frequency, MHz	Peak spectral power density, dB(μV/m)	EUT antenna gain, dBi	Limit, dB(μV/m)	Margin, dB*	Antenna polarization	Antenna height, m	Turn-table position**, degrees	Verdict
2402	75.95	1.95	103.2	-27.25	Horizontal	2.30	-75	Pass
2440	75.11	1.95	103.2	-28.09	Horizontal	1.70	-80	Pass
2480	77.73	1.95	103.2	-25.47	Horizontal	2.38	-79	Pass

*- Margin = Peak spectral power density - EUT antenna gain - 95.2 - calculated Peak spectral power density limit.

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

Reference numbers of test equipment used

HL 3903	HL 4933	HL 5902	HL 7585				
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Full description is given in Appendix A.

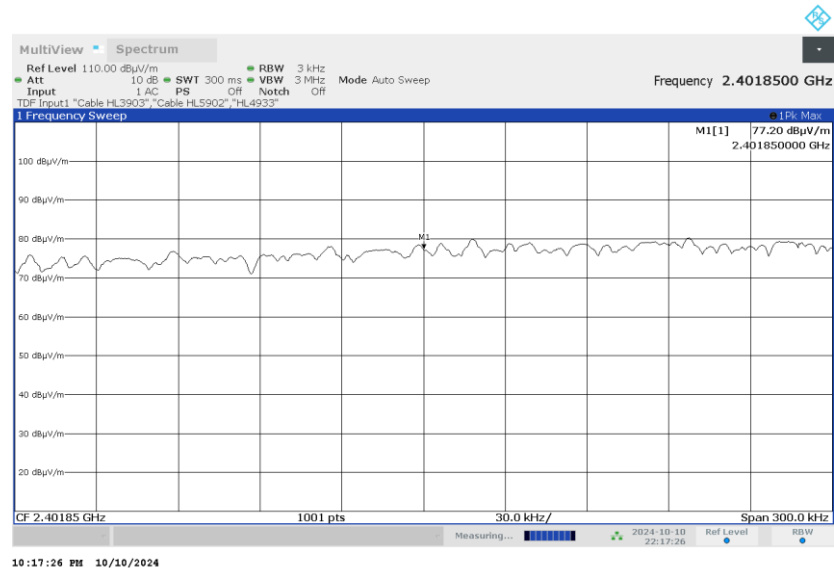
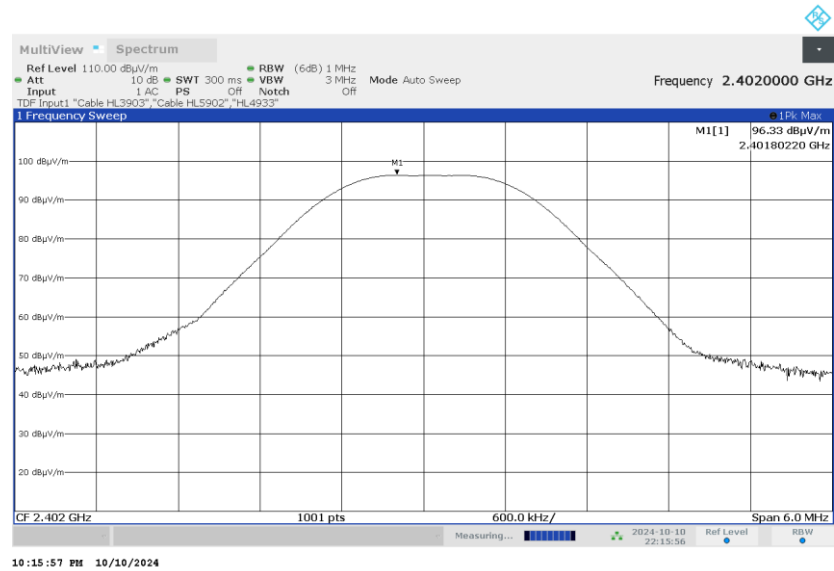


HERMON LABORATORIES

Test specification:		Section 15.247(e) / RSS-247 section 5.2(2), Maximum power spectral density	
Test procedure:		ANSI C63.10 section 11.10.2	
Test mode:		Verdict: PASS	
Date(s):			
10-Oct-24			
Temperature: 24 °C	Relative Humidity: 45 %	Air Pressure: 1011 hPa	Power: 25.5 VDC
Remarks:			

Plot 7.5.1 Peak spectral power density of carrier at low frequency

BIT RATE 1 Mbps



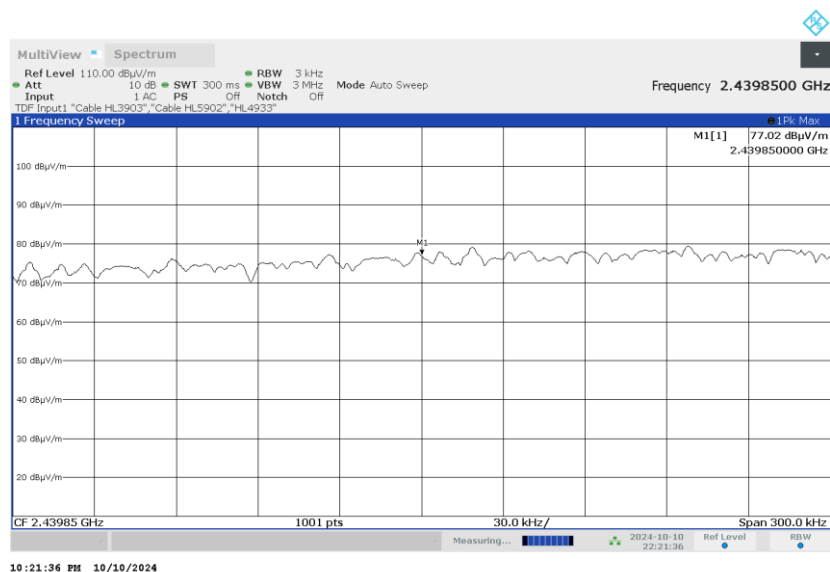
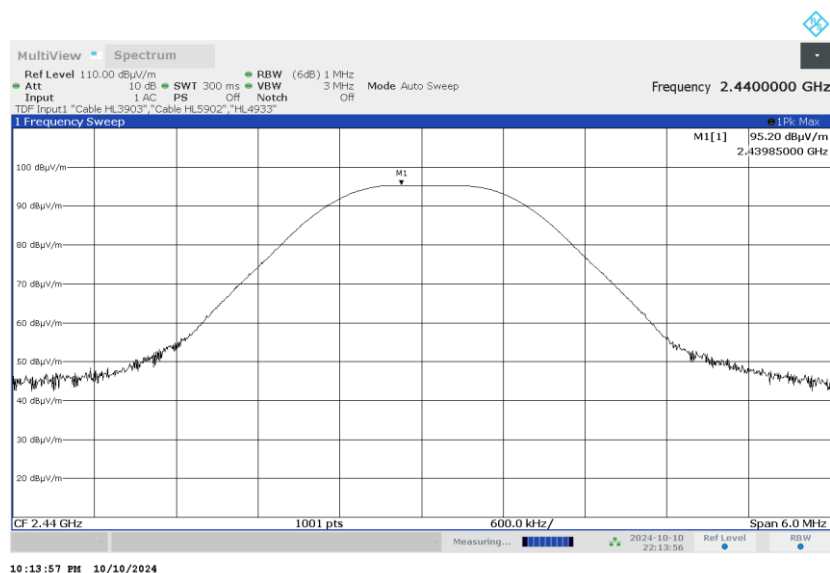


HERMON LABORATORIES

Test specification: Section 15.247(e) / RSS-247 section 5.2(2), Maximum power spectral density			
Test procedure: ANSI C63.10 section 11.10.2			
Test mode: Compliance		Verdict: PASS	
Date(s): 10-Oct-24			
Temperature: 24 °C	Relative Humidity: 45 %	Air Pressure: 1011 hPa	Power: 25.5 VDC
Remarks:			

Plot 7.5.2 Peak spectral power density of carrier at mid frequency

BIT RATE 1 Mbps



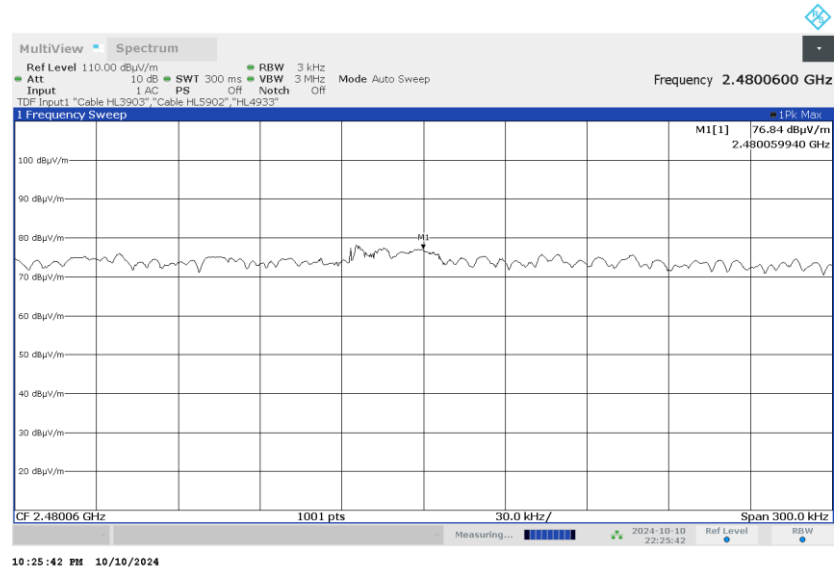
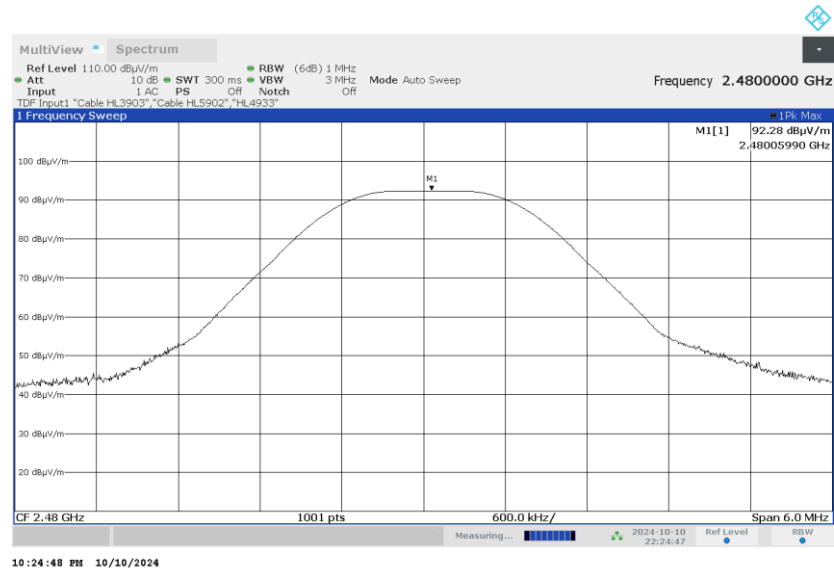


HERMON LABORATORIES

Test specification: Section 15.247(e) / RSS-247 section 5.2(2), Maximum power spectral density			
Test procedure: ANSI C63.10 section 11.10.2			
Test mode: Compliance		Verdict: PASS	
Date(s): 10-Oct-24			
Temperature: 24 °C	Relative Humidity: 45 %	Air Pressure: 1011 hPa	Power: 25.5 VDC
Remarks:			

Plot 7.5.3 Peak spectral power density of carrier at high frequency

BIT RATE 1 Mbps



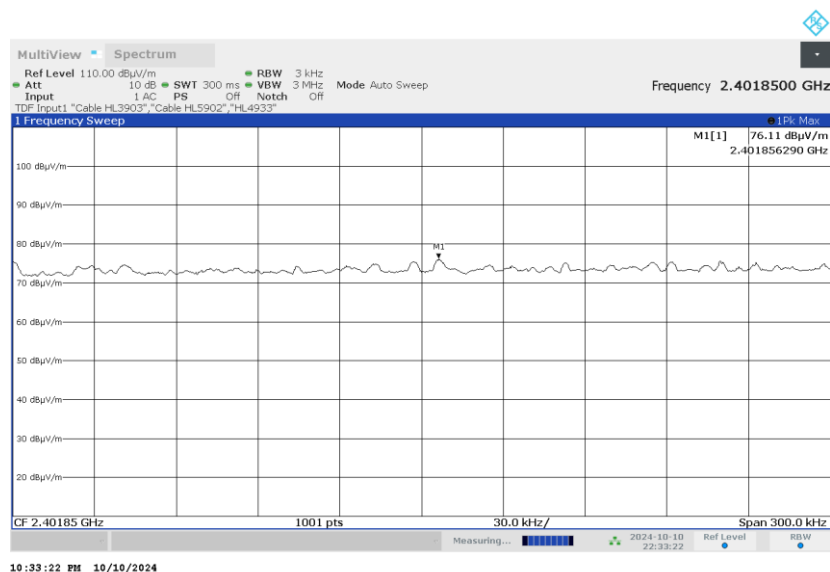
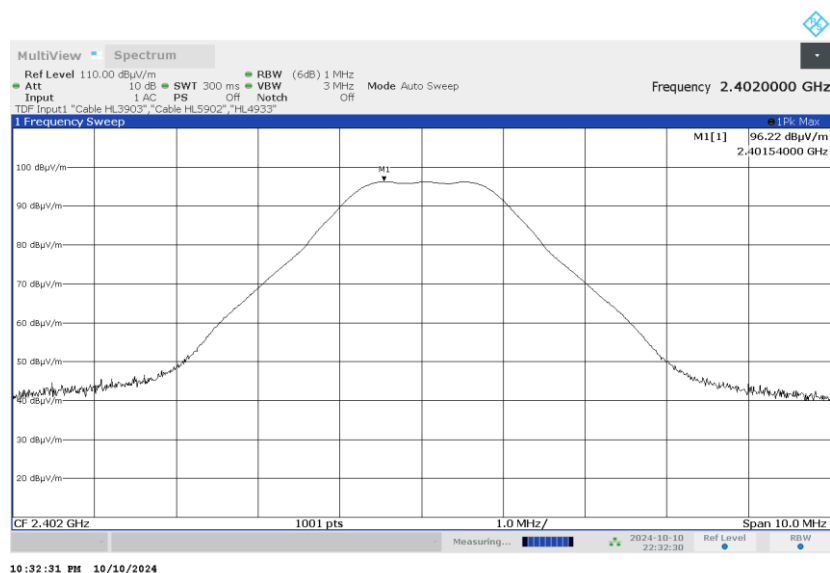


HERMON LABORATORIES

Test specification: Section 15.247(e) / RSS-247 section 5.2(2), Maximum power spectral density			
Test procedure: ANSI C63.10 section 11.10.2			
Test mode: Compliance		Verdict: PASS	
Date(s): 10-Oct-24			
Temperature: 24 °C	Relative Humidity: 45 %	Air Pressure: 1011 hPa	Power: 25.5 VDC
Remarks:			

Plot 7.5.4 Peak spectral power density of carrier at low frequency

BIT RATE 2 Mbps



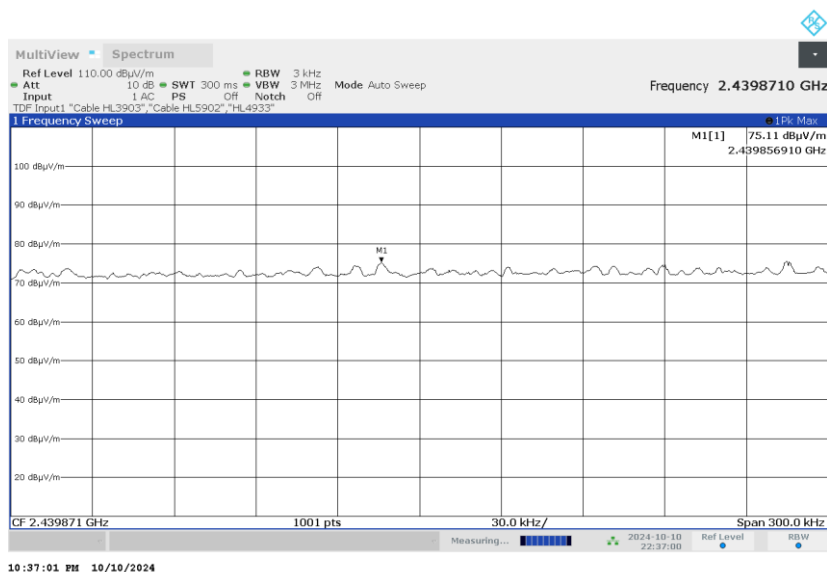
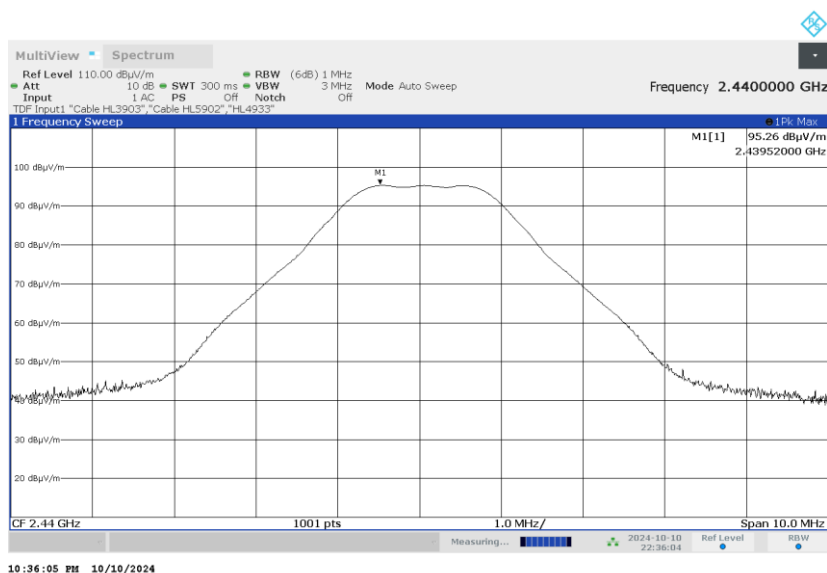


HERMON LABORATORIES

Test specification: Section 15.247(e) / RSS-247 section 5.2(2), Maximum power spectral density			
Test procedure: ANSI C63.10 section 11.10.2			
Test mode: Compliance		Verdict: PASS	
Date(s): 10-Oct-24			
Temperature: 24 °C	Relative Humidity: 45 %	Air Pressure: 1011 hPa	Power: 25.5 VDC
Remarks:			

Plot 7.5.5 Peak spectral power density of carrier at mid frequency

BIT RATE 2 Mbps



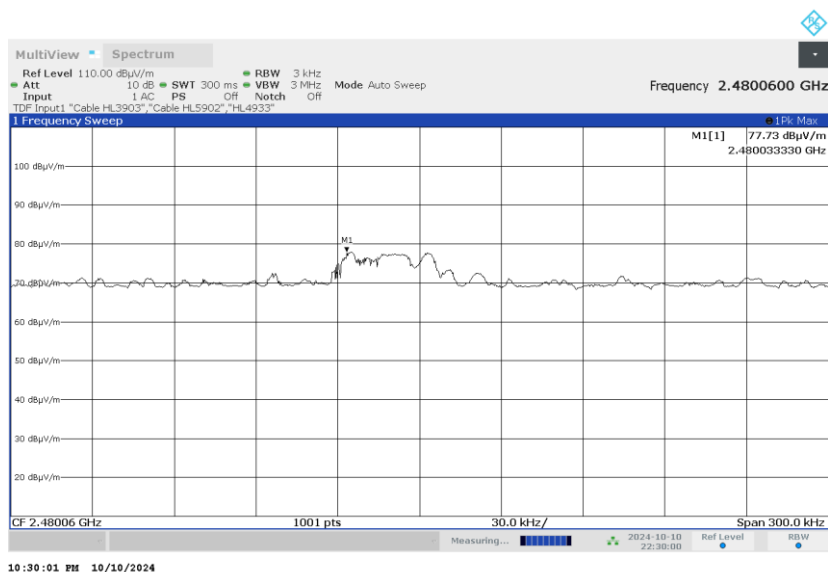
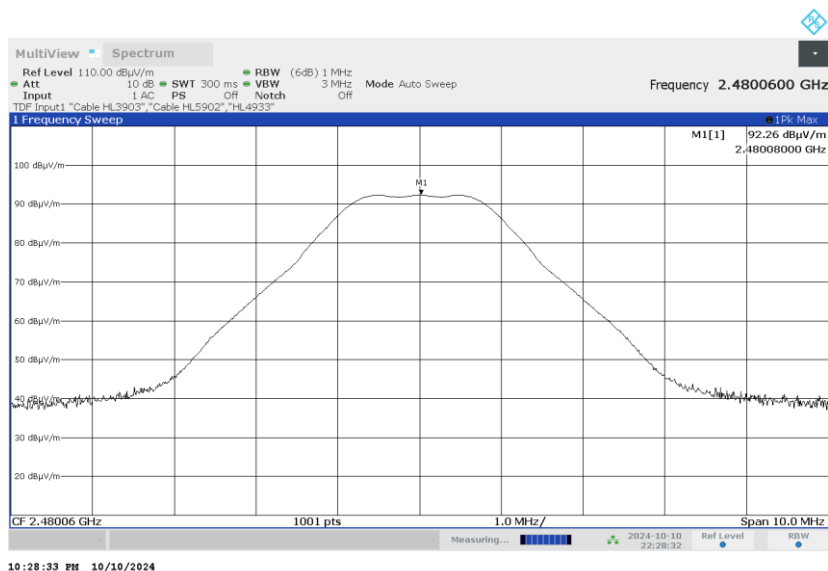


HERMON LABORATORIES

Test specification: Section 15.247(e) / RSS-247 section 5.2(2), Maximum power spectral density			
Test procedure: ANSI C63.10 section 11.10.2			
Test mode: Compliance		Verdict: PASS	
Date(s): 10-Oct-24			
Temperature: 24 °C	Relative Humidity: 45 %	Air Pressure: 1011 hPa	Power: 25.5 VDC
Remarks:			

Plot 7.5.6 Peak spectral power density of carrier at high frequency

BIT RATE 2 Mbps





Test specification: FCC Part 15, Section 207, Conducted emission			
Test procedure: ANSI C63.4, Section 7.3 and 12.2.4			
Test mode: Compliance		Verdict: PASS	
Date(s): 10-Oct-24			
Temperature: 24 °C	Relative Humidity: 45 %	Air Pressure: 1011 hPa	Power: 25.5 VDC
Remarks:			

7.6 Conducted emissions

7.6.1 General

This test was performed to measure common mode conducted emissions at the EUT power port. The specification test limits are given in Table 7.6.1.

Table 7.6.1 Limits for conducted emissions

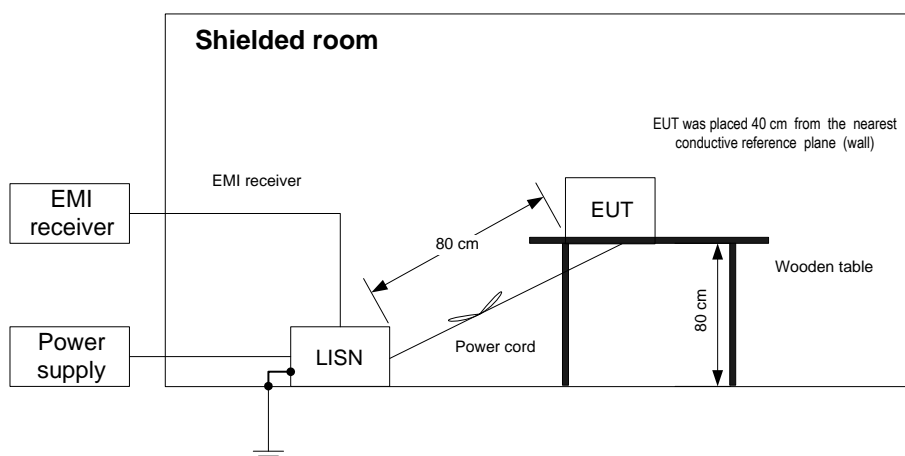
Frequency, MHz	Class B limit, dB(μ V)		Class A limit, dB(μ V)	
	QP	AVRG	QP	AVRG
0.15 - 0.5	66 - 56*	56 - 46*	79	66
0.5 - 5.0	56	46	73	60
5.0 - 30	60	50	73	60

* The limit decreases linearly with the logarithm of frequency.

7.6.2 Test procedure

- 7.6.2.1** The EUT was set up as shown in Figure 7.6.1 and the associated photographs, energized and the EUT performance was checked.
- 7.6.2.2** The measurements were performed at the EUT power terminals with the LISN connected to the EMI receiver in the frequency range referred to in Table 7.6.2. The unused coaxial connector of the LISN was terminated with 50 Ohm.
- 7.6.2.3** The position of the EUT cables was varied to find the highest emission.
- 7.6.2.4** The worst test results with respect to the limits were recorded in Table 7.6.2 and shown in the associated plots.

Figure 7.6.1 Setup for conducted emission measurements, floor standing EUT





HERMON LABORATORIES

Test specification: FCC Part 15, Section 207, Conducted emission			
Test procedure: ANSI C63.4, Section 7.3 and 12.2.4			
Test mode: Compliance		Verdict: PASS	
Date(s): 10-Oct-24			
Temperature: 24 °C	Relative Humidity: 45 %	Air Pressure: 1011 hPa	Power: 25.5 VDC
Remarks:			

Table 7.6.2 Conducted emission test results, charging mode

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

Frequency, MHz	Quasi-peak			Average			Line ID	Verdict
	Measured emission, dB(μV)	Limit, dB(μV)	Margin, dB*	Measured emission, dB(μV)	Limit, dB(μV)	Margin, dB*		
0.150	59.66	66.00	-6.34	38.49	56.00	-17.51	L1	Pass
0.152	59.25	65.89	-6.64	38.88	55.89	-17.01		
0.154	58.83	65.78	-6.95	39.06	55.78	-16.72		
0.156	58.45	65.67	-7.22	39.16	55.67	-16.51		
0.158	58.13	65.56	-7.43	39.27	55.56	-16.29		
0.160	57.93	65.45	-7.52	39.34	55.45	-16.11		
0.150	56.65	66.00	-9.35	35.83	56.00	-20.17	L2	Pass
0.152	56.32	65.89	-9.57	36.13	55.89	-19.76		
0.154	55.86	65.78	-9.92	36.33	55.78	-19.45		
0.156	55.44	65.67	-10.23	36.48	55.67	-19.19		
0.158	55.23	65.56	-10.33	36.63	55.56	-18.93		
0.160	55.18	65.45	-10.27	36.74	55.45	-18.71		

*- Margin = Measured emission - specification limit.

Reference numbers of test equipment used

HL 0787	HL 1501	HL 2888	HL 5476	HL 5707			
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Full description is given in Appendix A.

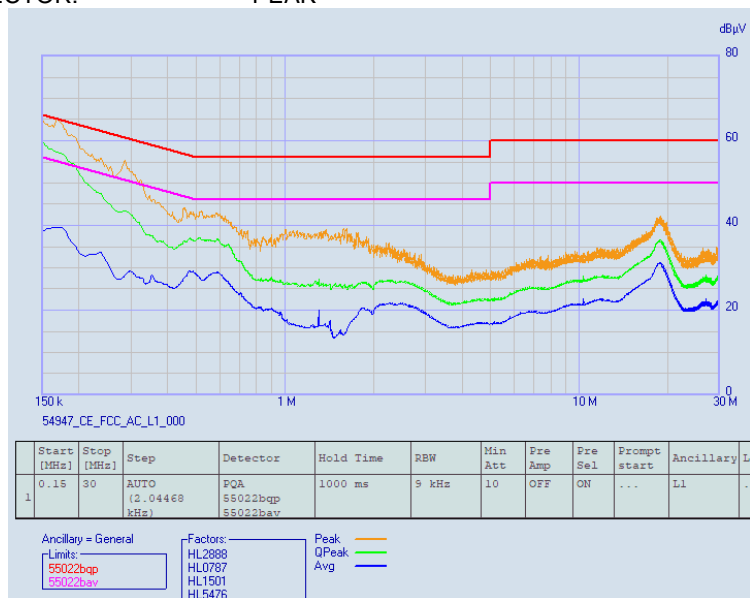


HERMON LABORATORIES

Test specification: FCC Part 15, Section 207, Conducted emission			
Test procedure: ANSI C63.4, Section 7.3 and 12.2.4			
Test mode: Compliance		Verdict: PASS	
Date(s): 10-Oct-24			
Temperature: 24 °C	Relative Humidity: 45 %	Air Pressure: 1011 hPa	Power: 25.5 VDC
Remarks:			

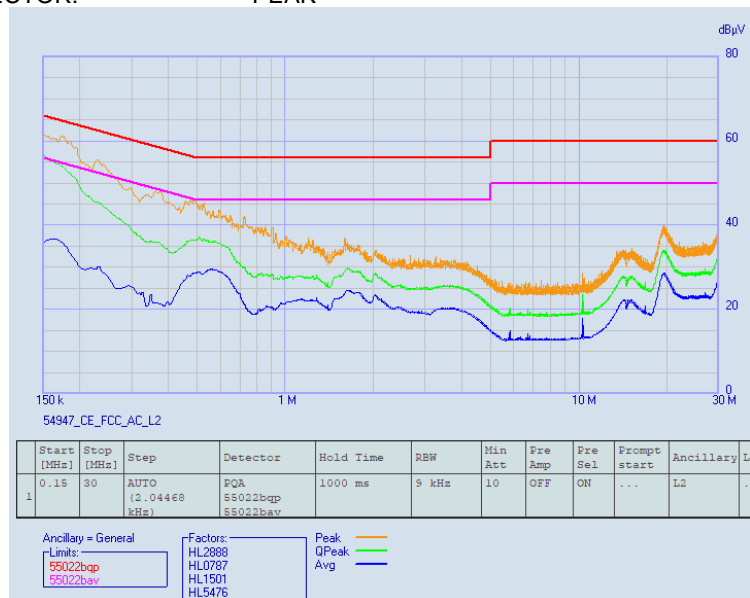
Plot 7.6.1 Conducted emission measurements, AC mains input of PSU, charging mode

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



Plot 7.6.2 Conducted emission measurements, AC mains input of PSU, charging mode

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



8 APPENDIX A Test equipment and ancillaries used for tests

HL No	Description	Manufacturer	Model	Ser. No.	Last Cal./ Check	Due Cal./ Check
3903	Microwave Cable Assembly, 40.0 GHz, 1.5 m, SMA/SMA	Huber-Suhner	SUCOFL EX 102A	1226/2A	06-May-24	06-May-25
4114	Antenna, Double-Ridged Waveguide Horn, 1 to 18 GHz	ETS Lindgren	3117	00123515	08-Nov-23	08-Nov-24
4338	Reject Band Filter, 50 Ohm, 0 to 2170 and 3000 to 18000 MHz, SMA-FM / SMA-M	Micro-Tronics	BRM 50702-02	023	10-Jul-24	10-Jul-26
4360	EMI Test Receiver, 20 Hz to 40 GHz	Rohde & Schwarz	ESU40	100322	24-Jan-24	24-Jan-25
4933	Active Horn Antenna, 1 GHz to 18 GHz	COM-POWER CORPORATION	AHA-118	701046	20-Feb-24	20-Feb-25
4956	Active horn antenna, 18 to 40 GHz	COM-POWER CORPORATION	AHA-840	105004	03-Mar-24	03-Mar-25
5209	Load Termination 50 Ohm, 0.5 W, DC-1GHz	RELM	LT-50	NA	15-May-24	15-May-25
5288	Trilog Antenna, 25 MHz - 8 GHz, 100W	Frankonia	ALX-8000E	00809	24-Mar-22	24-Mar-25
5376	EXA Signal Analyzer, 10 Hz - 32 GHz	Keysight Technologies	N9010B	MY57470404	08-Jan-24	08-Jan-25
5611	Precision Fixed Attenuator, 50 Ohm, 5 W, 10 dB, DC to 18 GHz	Mini Circuits	BW-S10W5+	NA	11-Mar-24	11-Mar-25
5637	Cable, 50 Ohm, DC to 18 GHz, 1.8 m, SMA/SMA	Mini Circuits	CBL-6FT-SMSM+	NA	29-Jul-24	29-Jul-25
5902	RF cable, 18 GHz, 6.0m, N-type	Huber-Suhner	SF126EA/11N/11N/6000	NA	19-Nov-23	19-Nov-24
7585	EMI Test Receiver, 1 Hz to 44 GHz	Rohde & Schwarz	ESW44	103130	21-Sep-23	21-Sep-24

9 APPENDIX B Test equipment correction factors

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
Conducted carrier power at RF antenna connector	Below 12.4 GHz: ± 1.7 dB 12.4 GHz to 40 GHz: ± 2.3 dB
Conducted emissions at RF antenna connector	9 kHz to 2.9 GHz: ± 2.6 dB 2.9 GHz to 6.46 GHz: ± 3.5 dB 6.46 GHz to 13.2 GHz: ± 4.3 dB 13.2 GHz to 22.0 GHz: ± 5.0 dB 22.0 GHz to 26.8 GHz: ± 5.5 dB 26.8 GHz to 40.0 GHz: ± 4.8 dB
Occupied bandwidth	± 8.0 %
Duty cycle, timing (Tx ON / OFF) and average factor measurements	± 1.0 %
Conducted emissions with LISN	9 kHz to 150 kHz: ± 3.9 dB 150 kHz to 30 MHz: ± 3.8 dB
Radiated emissions at 3 m measuring distance Horizontal polarization Vertical polarization	Biconilog antenna: ± 5.3 dB Biconical antenna: ± 5.0 dB Log periodic antenna: ± 5.3 dB Double ridged horn antenna: ± 5.3 dB Biconilog antenna: ± 6.0 dB Biconical antenna: ± 5.7 dB Log periodic antenna: ± 6.0 dB Double ridged horn antenna: ± 6.0 dB

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 1, 2, 15, 18 parts of Code of Federal Regulations 47 (CFR 47), Test Firm Registration Number is 927748, Designation Number is IL1001; registered by Industry Canada for electromagnetic emissions, file number IC 2186A-1 for OATS, certified by VCCI, Japan (the registration numbers are R-808 for OATS, R-1082 for anechoic chamber, G-869 for RE measurements above 1 GHz, C-845 for conducted emissions site and T-1606 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 15: 2022	Radio Frequency Devices
ANSI C63.10: 2013	American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices
RSS-247 Issue 3: 2023	Digital Transmission Systems (DTSs), Frequency Hopping Systems (FHSs) and Licence- Exempt Local Area Network (LE-LAN) Devices

13 APPENDIX F Abbreviations and acronyms

A	ampere
AC	alternating current
A/m	ampere per meter
AVRG	average (detector)
cm	centimeter
dB	decibel
dBm	decibel referred to one milliwatt
dB(μ V)	decibel referred to one microvolt
dB(μ V/m)	decibel referred to one microvolt per meter
dB(μ A)	decibel referred to one microampere
DC	direct current
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
OATS	open area test site
Ω	Ohm
PS	power supply
ppm	part per million (10^{-6})
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