

3M Semi-anechoic Chamber (2)- Radiated disturbance Test					
Equipment	Manufacturer	Model No.	Serial Number	Cal. date	Cal. Due date
				(mm-dd-yyyy)	(mm-dd-yyyy)
3M Chamber & Accessory Equipment	TDK	SAC-3	---	01/13/2024	01/12/2027
Receiver	R&S	ESC17	100938-003	09/03/2025	09/02/2026
TRILOG Broadband Antenna	schwarzbeck	VULB 9163	9163-618	05/11/2026	05/10/2027
Loop Antenna	Schwarzbeck	FMZB 1519B	1519B-076	03/29/2026	03/28/2027
Microwave Preamplifier	Tonscend	EMC051845SE	980380	11/25/2025	11/24/2026
Horn Antenna	A.H.SYSTEMS	SAS-574	374	07/02/2023	07/01/2026
Horn Antenna	ETS-LINGREN	BBHA 9120D	9120D-1869	03/31/2026	03/30/2027
Preamplifier	Agilent	11909A	12-1	02/06/2026	02/05/2027
Preamplifier	CD	PAP-1840-60	6041.6042	05/16/2026	05/15/2027
Test software	Fara	EZ-EMC	EMEC-3A1-Pre	---	---
Cable line	Fulai(7M)	SF106	5219/6A	01/13/2024	01/12/2027
Cable line	Fulai(6M)	SF106	5220/6A	01/13/2024	01/12/2027
Cable line	Fulai(3M)	SF106	5216/6A	01/13/2024	01/12/2027
Cable line	Fulai(3M)	SF106	5217/6A	01/13/2024	01/12/2027

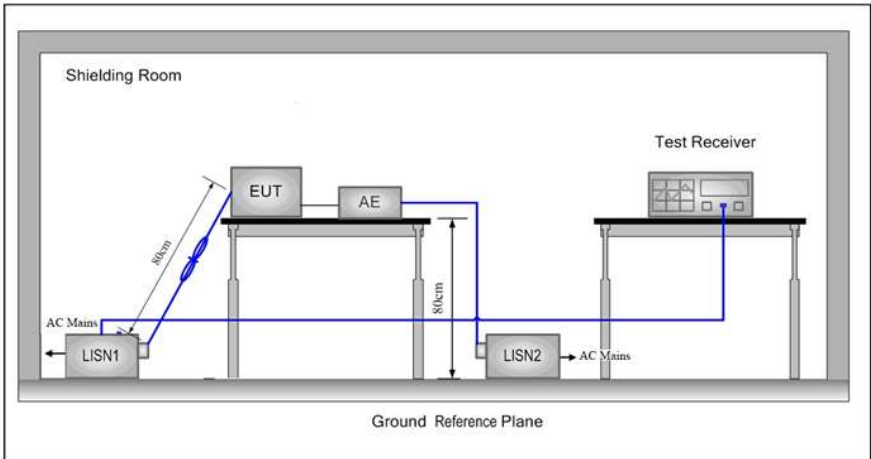
Conducted disturbance Test					
Equipment	Manufacturer	Model No.	Serial Number	Cal. date	Cal. Due date
				(mm-dd-yyyy)	(mm-dd-yyyy)
Receiver	R&S	ESCI	100435	04-07-2026	04-06-2027
Temperature/ Humidity Indicator	Defu	TH128	/	03-24-2026	03-23-2027
LISN	R&S	ENV216	100098	09-13-2025	09-12-2026
Barometer	changchun	DYM3	1188	---	---
Test software	Fara	EZ-EMC	EMC-CON 3A1.1	---	---
Capacitive voltage probe	Schwarzbeck	CVP 9222C	00124	06-07-2025	06-06-2026
				06-10-2026	06-09-2027
ISN	TESEQ	ISN T800	30297	11-24-2025	11-23-2026

5 Test results and Measurement Data

5.1 Antenna Requirement

Standard requirement:	47 CFR Part 15C Section 15.203 /247(c)
15.203 requirement: An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited. 15.247(b) (4) requirement: The conducted output power limit specified in paragraph (b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. Except as shown in paragraph (c) of this section, if transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1), (b)(2), and (b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.	
EUT Antenna:	Please see Internal photos
The antenna is FPC antenna. The best case gain of the antenna is 2.87dBi.	

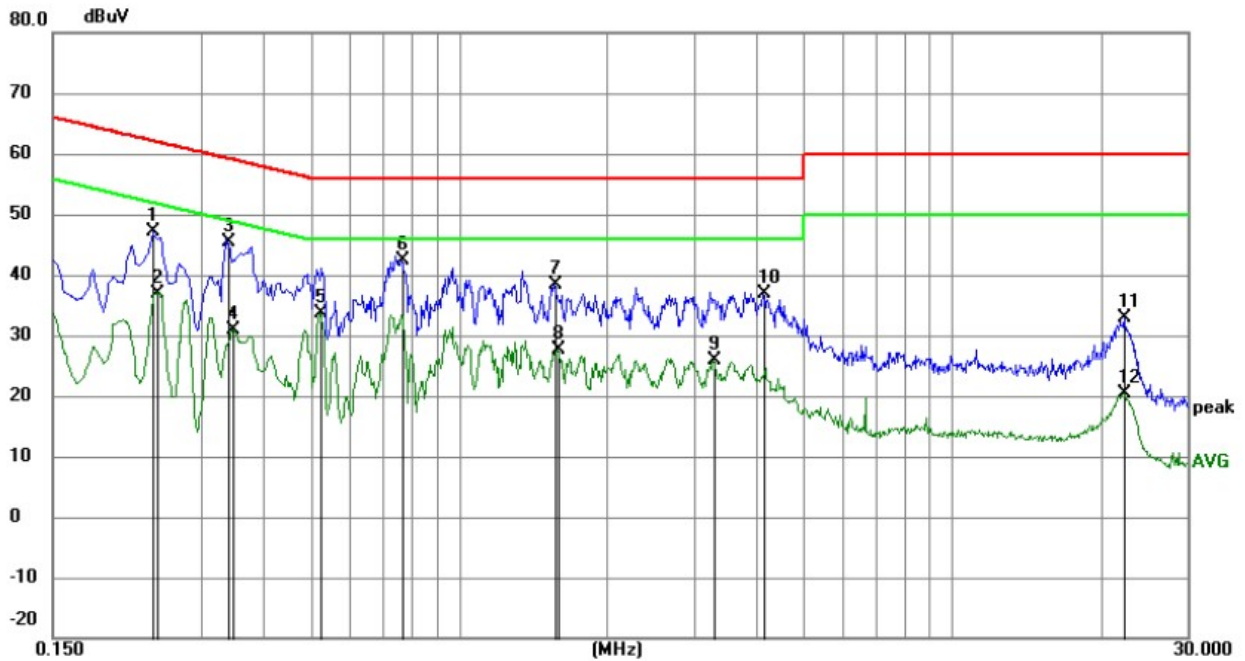
5.2 AC Power Line Conducted Emissions

Test Requirement:	47 CFR Part 15C Section 15.207		
Test Method:	ANSI C63.10-2020		
Test Frequency Range:	150kHz to 30MHz		
Receiver setup:	RBW=9 kHz, VBW=30 kHz, Sweep time=auto		
Limit:	Frequency range (MHz)	Limit (dBuV)	
		Quasi-peak	Average
	0.15-0.5	66 to 56*	56 to 46*
	0.5-5	56	46
	5-30	60	50
* Decreases with the logarithm of the frequency.			
Test Setup:			
Test Procedure:	1) The mains terminal disturbance voltage test was conducted in a shielded room. 2) The EUT was connected to AC power source through a LISN 1 (Line Impedance Stabilization Network) which provides a $50\Omega/50\mu H + 5\Omega$ linear impedance. The power cables of all other units of the EUT were connected to a second LISN 2, which was bonded to the ground reference plane in the same way as the LISN 1 for the unit being measured. A multiple socket outlet strip was used to connect multiple power cables to a single LISN provided the rating of the LISN was not exceeded. 3) The tabletop EUT was placed upon a non-metallic table 0.8m above the ground reference plane. And for floor-standing arrangement, the EUT was placed on the horizontal ground reference plane. 4) The test was performed with a vertical ground reference plane. The rear of the EUT shall be 0.4 m from the vertical ground reference plane. The vertical ground reference plane was bonded to the horizontal ground reference plane. The LISN 1 was placed 0.8 m from the boundary of the unit under test and bonded to a ground reference plane for LISNs mounted on top of the ground reference plane. This distance was between the closest points of the LISN 1 and the EUT. All other units of the EUT and associated equipment was at least 0.8 m from the LISN 2. 5) In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.10-2020 on conducted measurement.		
Test Mode:	All modes were tested, only the worse case lowest channel of 1Mbps for 802.11b was recorded in the report.		

Test Results: Pass

Measurement Data

Live line:



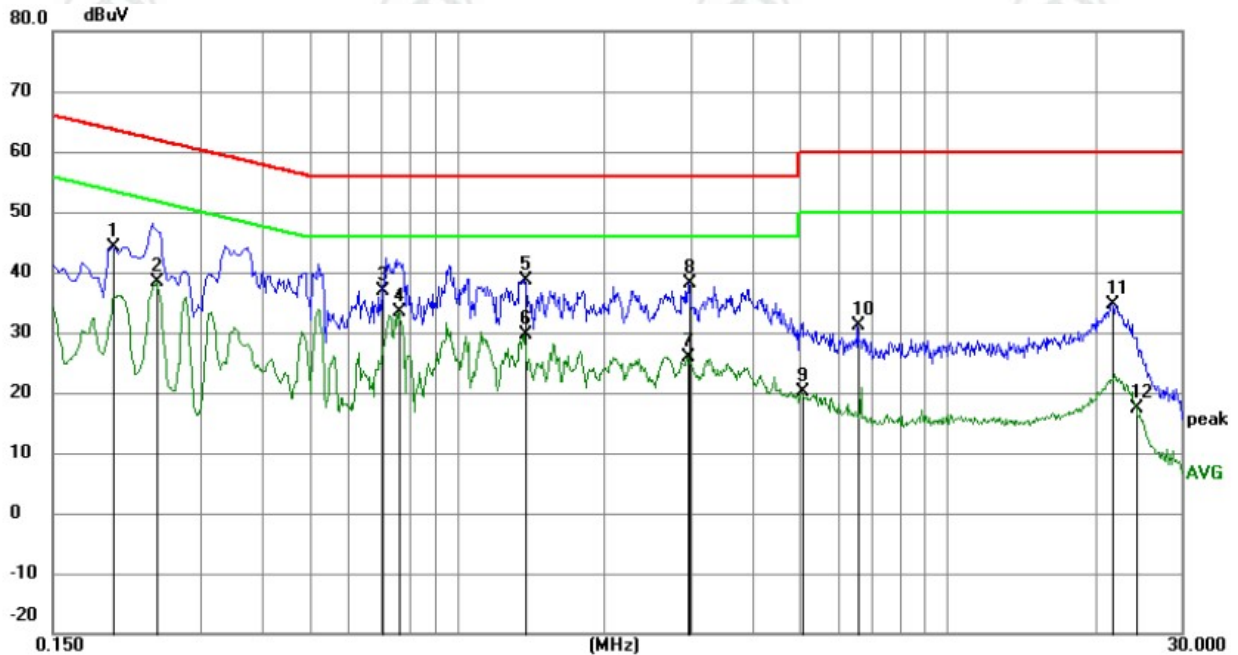
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Margin dB	Detector	Comment
1		0.2400	36.84	10.18	47.02	62.10	-15.08	QP	
2		0.2445	26.83	10.17	37.00	51.94	-14.94	AVG	
3		0.3392	35.25	10.11	45.36	59.22	-13.86	QP	
4		0.3480	20.89	10.11	31.00	49.01	-18.01	AVG	
5	*	0.5235	23.49	10.08	33.57	46.00	-12.43	AVG	
6		0.7665	32.18	10.16	42.34	56.00	-13.66	QP	
7		1.5630	28.16	10.17	38.33	56.00	-17.67	QP	
8		1.5855	17.43	10.17	27.60	46.00	-18.40	AVG	
9		3.2820	15.88	10.12	26.00	46.00	-20.00	AVG	
10		4.1550	26.87	10.09	36.96	56.00	-19.04	QP	
11		22.3980	23.16	9.80	32.96	60.00	-27.04	QP	
12		22.3980	10.54	9.80	20.34	50.00	-29.66	AVG	

Remark:

1. The following Quasi-Peak and Average measurements were performed on the EUT:
2. Final Test Level =Receiver Reading + LISN Factor + Cable Loss.
3. Margin=Measurement-Limit.

- 4. Measurement=Reading Level+Correct Factor.
- 5. In the test results, an asterisk (*) indicates Maximum Data, a cross (X) indicates over Limit.
- 6. If the Peak value under Average limit, the Average value is not recorded in the report.

Neutral line:

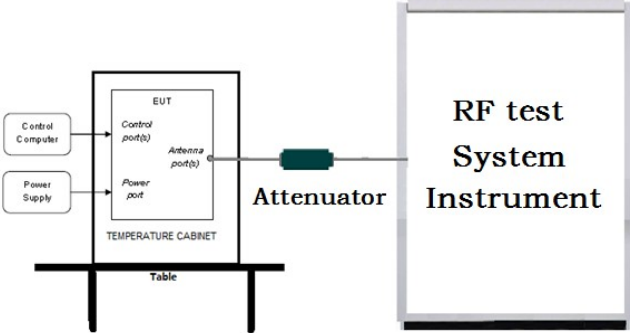


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Margin dB	Detector	Comment
1		0.1995	34.00	10.21	44.21	63.63	-19.42	QP	
2		0.2445	28.10	10.17	38.27	51.94	-13.67	AVG	
3		0.7080	26.75	10.13	36.88	56.00	-19.12	QP	
4	*	0.7620	23.22	10.16	33.38	46.00	-12.62	AVG	
5		1.3740	28.46	10.18	38.64	56.00	-17.36	QP	
6		1.3740	19.57	10.18	29.75	46.00	-16.25	AVG	
7		2.9534	15.86	10.13	25.99	46.00	-20.01	AVG	
8		2.9625	27.98	10.13	38.11	56.00	-17.89	QP	
9		5.0460	10.06	10.06	20.12	50.00	-29.88	AVG	
10		6.5895	21.07	10.04	31.11	60.00	-28.89	QP	
11		21.6689	24.92	9.80	34.72	60.00	-25.28	QP	
12		24.3330	7.67	9.81	17.48	50.00	-32.52	AVG	

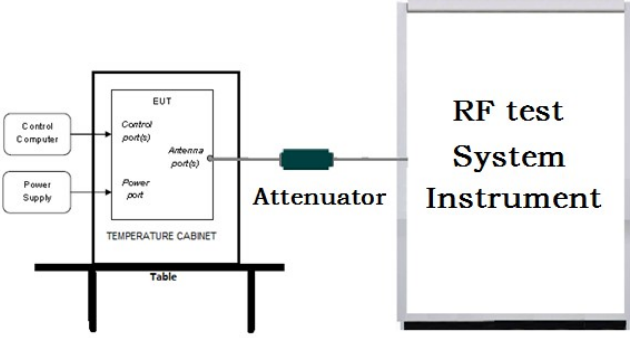
Remark:

1. The following Quasi-Peak and Average measurements were performed on the EUT:
2. Final Test Level =Receiver Reading + LISN Factor + Cable Loss.
3. Margin=Measurement-Limit.
4. Measurement=Reading Level+Correct Factor.
5. In the test results, an asterisk (*) indicates Maximum Data, a cross (X) indicates over Limit.
6. If the Peak value under Average limit, the Average value is not recorded in the report.

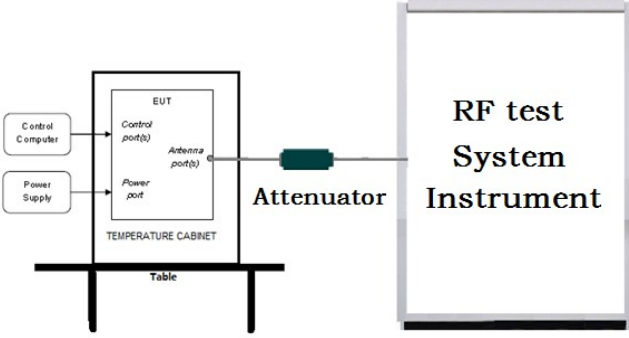
5.3 Maximum Conducted Output Power

Test Requirement:	47 CFR Part 15C Section 15.247 (b)(3)
Test Method:	ANSI C63.10-2020
Test Setup:	
Test Procedure:	1. PKPM1 Peak power meter measurement The maximum peak conducted output power may be measured using a broadband peak RF power meter. The power meter shall have a video bandwidth that is greater than or equal to the DTS bandwidth and shall use a fast-responding diode detector.
Limit:	30dBm
Test Mode:	Refer to clause 3.3
Test Results:	Refer to Appendix A

5.4 DTS Bandwidth

Test Requirement:	47 CFR Part 15C Section 15.247 (a)(2)
Test Method:	ANSI C63.10-2020
Test Setup:	 Remark: Offset=Cable loss+ attenuation factor.
Test Procedure:	a) Set RBW = 100 kHz. b) Set the VBW $\geq [3 \times \text{RBW}]$. c) Detector = peak. d) Trace mode = max hold. e) Sweep = auto couple. f) Allow the trace to stabilize. g) Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.
Limit:	$\geq 500 \text{ kHz}$
Test Mode:	Refer to clause 3.3
Test Results:	Refer to Appendix A

5.5 Maximum Power Spectral Density

Test Requirement:	47 CFR Part 15C Section 15.247 (e)
Test Method:	ANSI C63.10-2020
Test Setup:	 Remark: Offset=Cable loss+ attenuation factor.
Test Procedure:	a) Set analyzer center frequency to DTS channel center frequency. b) Set the span to 1.5 times the DTS bandwidth. c) Set the RBW to $3 \text{ kHz} < \text{RBW} < 100 \text{ kHz}$. d) Set the VBW $> [3 \times \text{RBW}]$. e) Detector = power averaging (rms) or sample detector (when rms not available). f) Ensure that the number of measurement points in the sweep $\geq [2 \times \text{span} / \text{RBW}]$. g) Sweep time = auto couple. h) Employ trace averaging (rms) mode over a minimum of 100 traces.. i) Use the peak marker function to determine the maximum amplitude level. j) If the measured value exceeds requirement, then reduce RBW (but no less than 3 kHz) and repeat (note that this might require zooming in on the emission of interest and reducing the span to meet the minimum measurement point requirement as the RBW is reduced).
Limit:	$\leq 8.00 \text{ dBm}/3 \text{ kHz}$
Test Mode:	Refer to clause 3.3
Test Results:	Refer to Appendix A