

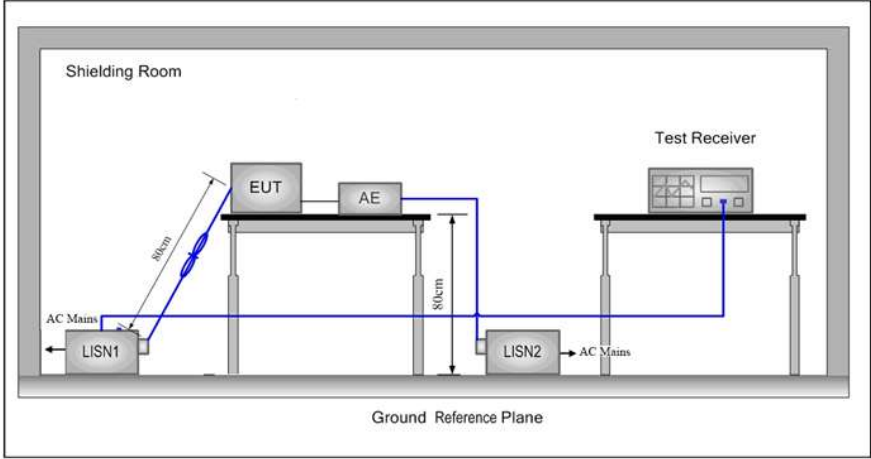
Conducted disturbance Test					
Equipment	Manufacturer	Model No.	Serial Number	Cal. date	Cal. Due date
				(mm-dd-yyyy)	(mm-dd-yyyy)
Receiver	R&S	ESCI	100435	04-07-2026	04-06-2027
Temperature/ Humidity Indicator	Defu	TH128	/	03-24-2026	03-23-2027
LISN	R&S	ENV216	100098	09-13-2025	09-12-2026
Barometer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

5 Radio Technical Requirements Specification

5.1 Antenna Requirement

Standard requirement:	47 CFR Part 15C Section 15.203
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.	
EUT Antenna:	Please see Internal photos
The antenna is Chip Antenna. The best case gain of the antenna is 5.40dBi.	

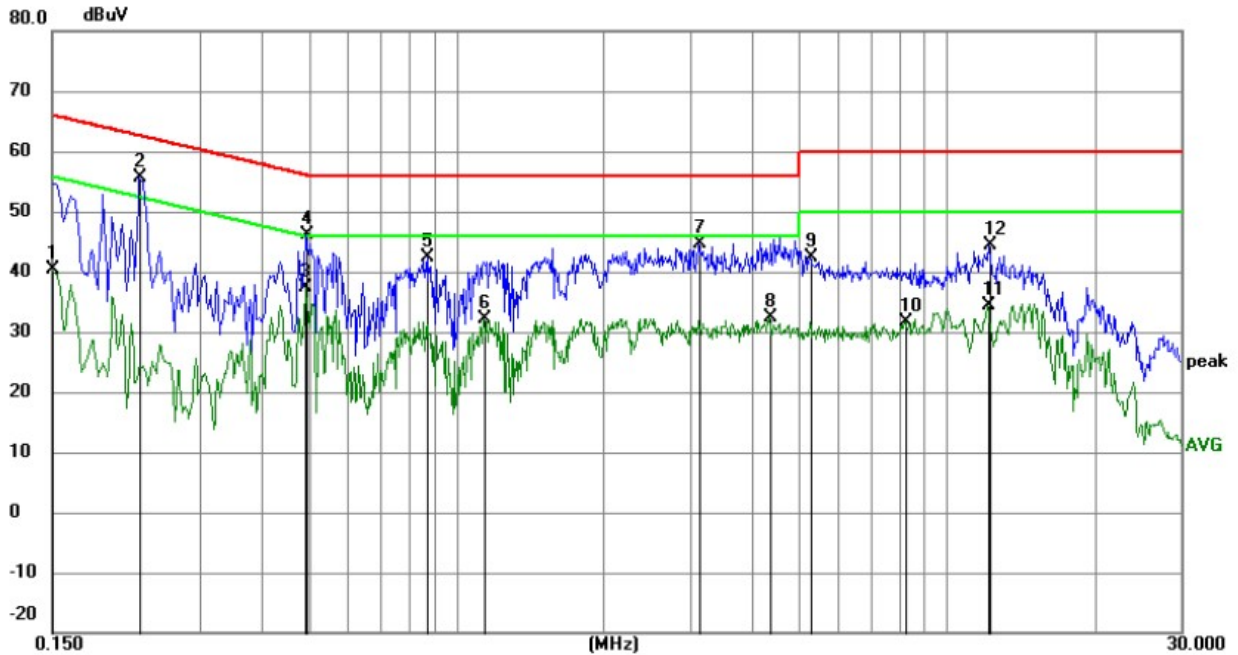
5.2 AC Power Line Conducted Emissions

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 $50\Omega/50\mu\text{H} + 5\Omega$ 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 worst case was recorded in the report.
Test Results:	Pass

Measurement Data

Live line:

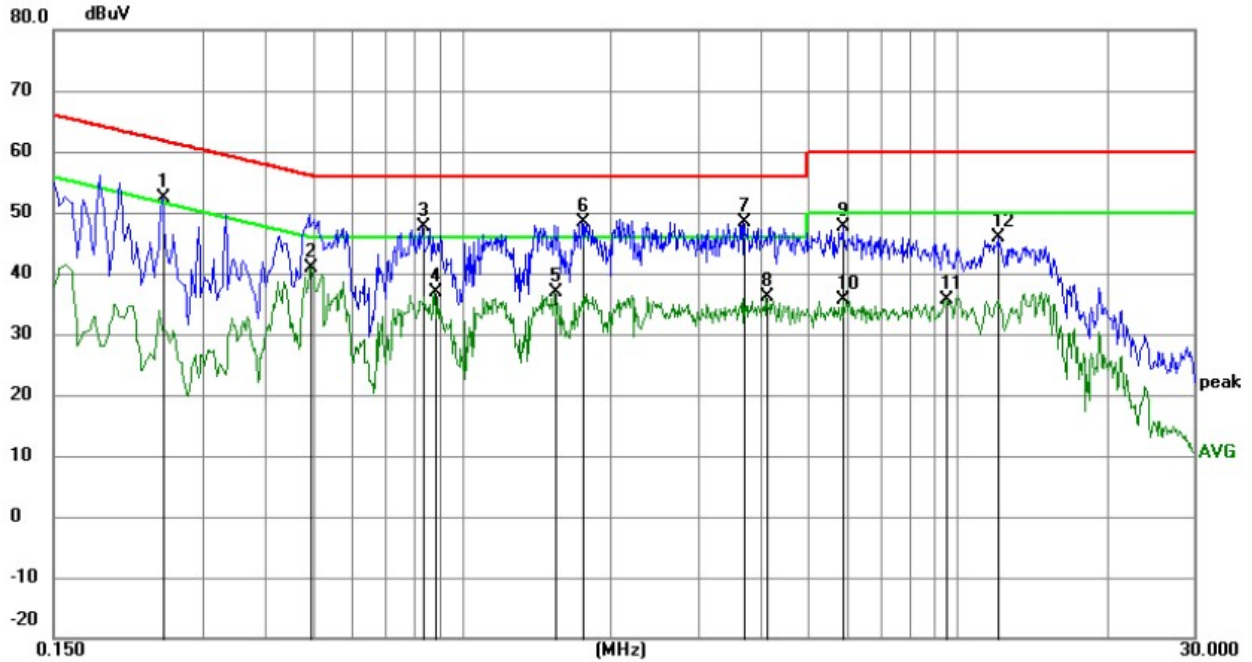


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Margin dB	Detector	Comment
1		0.1500	30.07	10.29	40.36	56.00	-15.64	AVG	
2	*	0.2265	45.39	10.21	55.60	62.58	-6.98	QP	
3		0.4920	27.40	10.08	37.48	46.13	-8.65	AVG	
4		0.4965	36.07	10.07	46.14	56.06	-9.92	QP	
5		0.8745	32.23	10.21	42.44	56.00	-13.56	QP	
6		1.1355	21.96	10.22	32.18	46.00	-13.82	AVG	
7		3.1380	34.56	10.08	44.64	56.00	-11.36	QP	
8		4.3575	22.25	10.01	32.26	46.00	-13.74	AVG	
9		5.2710	32.35	9.96	42.31	60.00	-17.69	QP	
10		8.2005	21.82	9.85	31.67	50.00	-18.33	AVG	
11		12.1605	24.59	9.74	34.33	50.00	-15.67	AVG	
12		12.2010	34.62	9.74	44.36	60.00	-15.64	QP	

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:

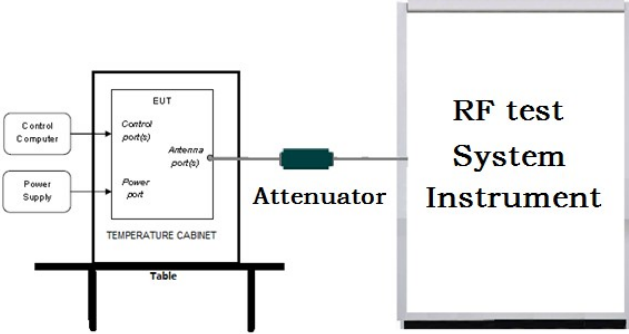


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Margin dB	Detector	Comment
1		0.2490	42.29	10.16	52.45	61.79	-9.34	QP	
2	*	0.4965	30.79	10.07	40.86	46.06	-5.20	AVG	
3		0.8340	37.35	10.20	47.55	56.00	-8.45	QP	
4		0.8835	26.76	10.21	36.97	46.00	-9.03	AVG	
5		1.5405	26.59	10.18	36.77	46.00	-9.23	AVG	
6		1.7475	38.13	10.16	48.29	56.00	-7.71	QP	
7		3.7005	38.32	10.05	48.37	56.00	-7.63	QP	
8		4.1325	26.01	10.03	36.04	46.00	-9.96	AVG	
9		5.8695	37.69	9.93	47.62	60.00	-12.38	QP	
10		5.8695	25.64	9.93	35.57	50.00	-14.43	AVG	
11		9.4785	25.89	9.84	35.73	50.00	-14.27	AVG	
12		12.1200	36.17	9.75	45.92	60.00	-14.08	QP	

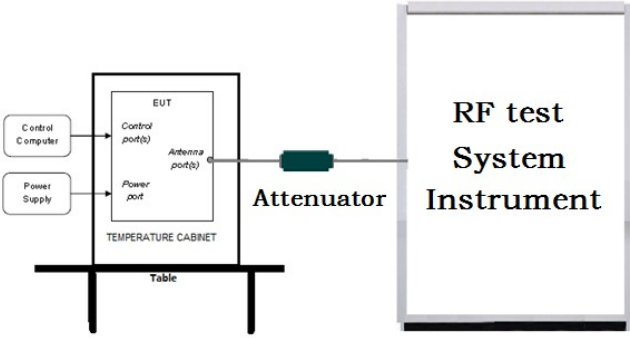
Remark:

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.

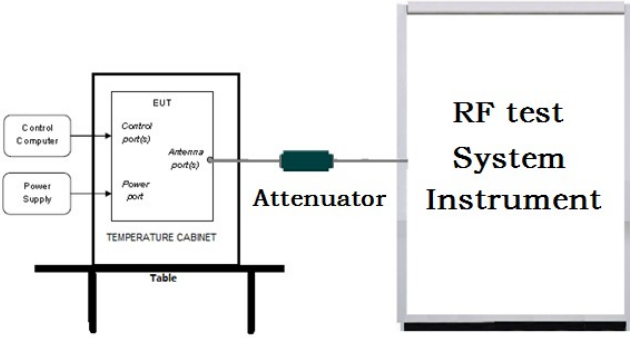
5.3 Maximum Conducted Output Power

Test Requirement:	47 CFR Part 15C Section 15.407 (a)													
Test Method:	KDB789033 D02 General UNII Test Procedures New Rules v02r01 Section E													
Test Setup:														
Test Procedure:	1. The testing follows the Measurement Procedure of KDB789033 D02 General UNII Test Procedures New Rules v02r01 Section E, 3, a 2. The RF output of EUT was connected to the power meter by RF cable and attenuator. The path loss was compensated to the results for each measurement. 3. Set to the maximum power setting and enable the EUT transmit continuously. 4. Measure the conducted output power and record the results in the test report.													
Limit:	<table border="1"> <thead> <tr> <th>Frequency band (MHz)</th><th>Limit</th></tr> </thead> <tbody> <tr> <td rowspan="2">5150-5250</td><td>≤1W(30dBm) for master device</td></tr> <tr> <td>≤250mW(24dBm) for client device</td></tr> <tr> <td>5250-5350</td><td>≤250mW(24dBm) for client device or 11dBm+10logB*</td></tr> <tr> <td>5470-5725</td><td>≤250mW(24dBm) for client device or 11dBm+10logB*</td></tr> <tr> <td>5725-5850</td><td>≤1W(30dBm)</td></tr> <tr> <td>Remark:</td><td>* Where B is the 26dB emission bandwidth in MHz The maximum conducted output power must be measured over any interval of continuous transmission using instrumentation calibrated in terms of an rms-equivalent voltage.</td></tr> </tbody> </table>	Frequency band (MHz)	Limit	5150-5250	≤1W(30dBm) for master device	≤250mW(24dBm) for client device	5250-5350	≤250mW(24dBm) for client device or 11dBm+10logB*	5470-5725	≤250mW(24dBm) for client device or 11dBm+10logB*	5725-5850	≤1W(30dBm)	Remark:	* Where B is the 26dB emission bandwidth in MHz The maximum conducted output power must be measured over any interval of continuous transmission using instrumentation calibrated in terms of an rms-equivalent voltage.
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5725-5850	≤1W(30dBm)													
Remark:	* Where B is the 26dB emission bandwidth in MHz The maximum conducted output power must be measured over any interval of continuous transmission using instrumentation calibrated in terms of an rms-equivalent voltage.													
Test Mode:	Transmitting mode with modulation													
Test Results:	Refer to Appendix A													

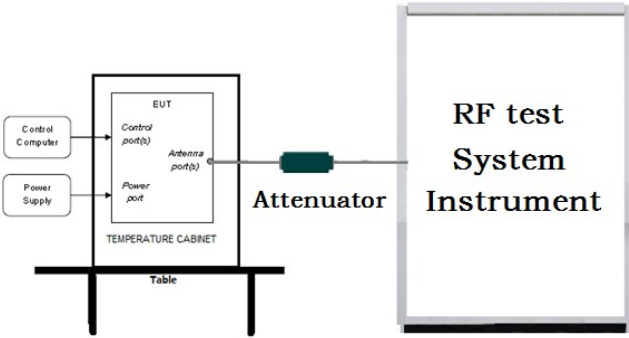
5.4 6dB Emission Bandwidth

Test Requirement:	47 CFR Part 15C Section 15.407 (e)
Test Method:	KDB789033 D02 General UNII Test Procedures New Rules v02r01 Section C
Test Setup:	 Remark: Offset=Cable loss+ attenuation factor.
Test Procedure:	1. KDB789033 D02 General UNII Test Procedures New Rules v02r01 Section C 2. Set to the maximum power setting and enable the EUT transmit continuously. 3. Make the measurement with the spectrum analyzer's resolution bandwidth (RBW) = 100 kHz. Set the Video bandwidth (VBW) = 300 kHz. In order to make an accurate measurement. The 6dB bandwidth must be greater than 500 kHz. 4. Measure and record the results in the test report.
Limit:	≥ 500 kHz
Test Mode:	Transmitting mode with modulation
Test Results:	Refer to Appendix A

5.5 26dB Emission Bandwidth and 99% Occupied Bandwidth

Test Requirement:	47 CFR Part 15C Section 15.407 (a)
Test Method:	KDB789033 D02 General UNII Test Procedures New Rules v02r01 Section C&D
Test Setup:	 Remark: Offset=Cable loss+ attenuation factor.
Test Procedure:	For 26dB Occupied Bandwidth: 1. KDB789033 D02 General UNII Test Procedures New Rules v02r01 Section D 2. Set to the maximum power setting and enable the EUT transmit continuously. 3. Make the measurement with the spectrum analyzer's resolution bandwidth (RBW) = 100 kHz. Set the Video bandwidth (VBW) = 300 kHz. In order to make an accurate measurement. 4. Measure and record the results in the test report. For 99% Occupied Bandwidth: 1. KDB789033 D02 General UNII Test Procedures New Rules v02r01 Section C 2. Set to the maximum power setting and enable the EUT transmit continuously. 3. For 99% Bandwidth Measurement, the spectrum analyzer's resolution bandwidth (RBW) is set 1-5% of the emission bandwidth and set the Video bandwidth (VBW) $\geq 3 * RBW$. 4. Measure and record the results in the test report.
Limit:	No restriction limits
Test Mode:	Transmitting mode with modulation
Test Results:	Refer to Appendix A

5.6 Maximum Power Spectral Density

Test Requirement:	47 CFR Part 15C Section 15.407 (a)													
Test Method:	KDB789033 D02 General UNII Test Procedures New Rules v02r01 Section F													
Test Setup:	 Remark: Offset=Cable loss+ attenuation factor.													
Test Procedure:	1. Set the spectrum analyzer or EMI receiver span to view the entire emission bandwidth. 1. Set RBW = 510 kHz/1 MHz, VBW ≥ 3*RBW, Sweep time = Auto, Detector = RMS. 2. Allow the sweeps to continue until the trace stabilizes. 3. Use the peak marker function to determine the maximum amplitude level.													
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Test Mode:	Transmitting mode with modulation													
Test Results:	Refer to Appendix A													