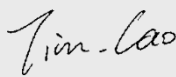
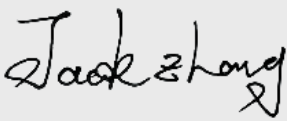


Test report No:
2270660R-RF-US-P06V01

FCC TEST REPORT

Product Name	Docking Station (Vehicle)
Trademark	Datalogic
Model and /or type reference	DL36VSD
FCC ID	U4GDL36VSD
Applicant's name / address	Datalogic S.r.l. Via San Vitalino no.13,Calderara di Reno -40012(BO)-Italy
Test method requested, standard	FCC CFR Title 47 Part 15 Subpart C ANSI C63.10: 2013
Verdict Summary	IN COMPLIANCE
Documented by (name / position & signature)	Tim Cao/Project Engineer 
Approved by (name / position & signature)	Jack Zhang/ Supervisor 
Date of issue	2022-12-05
Report Version	V1.1
Report template No	Template_FCC Part 15C-RF-V1.0

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COMPETENCES AND GUARANTEES

DEKRA is a testing laboratory competent to carry out the tests described in this report.

In order to assure the traceability to other national and international laboratories, DEKRA has a calibration and maintenance program for its measurement equipment.

DEKRA guarantees the reliability of the data presented in this report, which is the result of the measurements and the tests performed to the item under test on the date and under the conditions stated in the report and it is based on the knowledge and technical facilities available at DEKRA at the time of performance of the test.

DEKRA is liable to the client for the maintenance of the confidentiality of all information related to the item under test and the results of the test.

The results presented in this Test Report apply only to the particular item under test established in this document.

IMPORTANT: No parts of this report may be reproduced or quoted out of context, in any form or by any means, except in full, without the previous written permission of DEKRA.

GENERAL CONDITIONS

Test Location	No. 99, Hongye Road, Suzhou Industrial Park Suzhou, 215006, P.R. China
Date(receive sample)	Jul. 25, 2022
Date (start test)	Jul. 26, 2022
Date (finish test)	Aug. 12, 2022

1. This report is only referred to the item that has undergone the test.
2. This report does not constitute or imply on its own an approval of the product by the Certification Bodies or Competent Authorities.
3. This document is only valid if complete; no partial reproduction can be made without previous written permission of DEKRA.
4. This test report cannot be used partially or in full for publicity and/or promotional purposes without previous written permission of DEKRA.

ENVIRONMENTAL CONDITIONS

The climatic conditions during the tests are within the limits specified by the manufacturer for the operation of the EUT and the test equipment. The climatic conditions during the tests were within the following limits:

Ambient temperature	15 °C – 35 °C
Relative Humidity air	30% - 60%

If explicitly required in the basic standard or applied product / product family standard the climatic values are recorded and documented separately in this test report.

POSSIBLE TEST CASE VERDICTS

Test case does not apply to test object	N/A
Test object does meet requirement	P (Pass) / PASS
Test object does not meet requirement	F (Fail) / FAIL
Not measured	N/M

ABBREVIATIONS

For the purposes of the present document, the following abbreviations apply:

EUT	: Equipment Under Test
QP	: Quasi-Peak
CAV	: CISPR Average
AV	: Average
CDN	: Coupling Decoupling Network
SAC	: Semi-Anechoic Chamber
OATS	: Open Area Test Site
BW	: Bandwidth
AM	: Amplitude Modulation
PM	: Pulse Modulation
HCP	: Horizontal Coupling Plane
VCP	: Vertical Coupling Plane
U_N	: Nominal voltage
T_x	: Transmitter
R_x	: Receiver
N/A	: Not Applicable
N/M	: Not Measured

DOCUMENT HISTORY

Report No.	Version	Description	Issued Date
2270660R-RF-US-P06V01	V1.0	Initial issue of report.	2022-11-29
2270660R-RF-US-P06V01	V1.1	P22~23 update the test data.	2022-12-05

REMARKS AND COMMENTS

1. The equipment under test (EUT) does meet the essential requirements of the stated standard(s)/test(s).
2. These test results on a sample of the device are for the purpose of demonstrating Compliance with Part 15 Subpart C.
3. The measurement result is considered in conformance with the requirement if it is within the prescribed limit, It is not necessary to account the uncertainty associated with the measurement result.
4. The test results presented in this report relate only to the object tested.
5. The test report shall not be reproduced without the written approval of DEKRA Testing and Certification (Suzhou) Co., Ltd.
6. This report will not be used for social proof function in China market.
7. DEKRA declines any responsibility with the following test data provided by customer that may affect the validity of result:
 - Chapter 1.1 General Description of the Item(s);
 - Chapter 1.2 Antenna Informaion;
 - Chapter 1.3 Channel List.

USED EQUIPMENT

Radiated Emission(9KHz-30MHz,30MHz-1GHz) / AC2

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
EMI Test Receiver	R&S	ESCI	100573	2021.10.30	2022.10.29
Bilog Antenna	Teseq GmbH	CBL6112D	27611	2021.12.03	2022.12.02
Temperature/Humidity Meter	RTS	RTS-8S	AC2-TH	2021.11.08	2022.11.07
Coaxial Cable	Huber+Suhner	RG 214	AC2-C	2022.03.31	2023.03.30
Loop Antenna	R&S	HFH2-Z2	833799/003	2022.04.15	2023.04.14
Dekra test software	Dekra				

UNCERTAINTY

Uncertainties have been calculated according to the DEKRA internal document. The reported expanded uncertainties are based on a standard uncertainty multiplied by a coverage factor of $k=2$, providing a level of confidence of approximately 95% .

Test item	Uncertainty
AC Power Line Conducted Emission	9kHz~150kHz: 2.80dB 150kHz~30MHz: 2.40dB
Radiated Emission(30MHz~1GHz)	Horizontal: 30MHz~200MHz: 3.50 dB 300MHz~1GHz: 3.60 dB Vertical: 30MHz~200MHz: 3.60 dB 300MHz~1GHz: 3.50 dB
Radiated Emission(9KHz~30MHz)	Horizontal: 9KHz~30MHz: 3.50 dB Vertical: 9KHz~330MHz: 3.60 dB
Occupied Bandwidth	$\pm 150\text{Hz}$

1 GENERAL INFORMATION

1.1 General Description of the Item(s)

Product Name..... :	Docking Station (Vehicle)
Model No. :	DL36VSD
Trademark	Datalogic
FCC ID	U4GDL36VSD
Manufacturer..... :	Datalogic S.r.l.
Manufacturer address	Via San Vitalino no.13,Calderara di Reno -40012(BO)-Italy

Operating Frequency Range	119-140KHz
Type of Modulation..... :	ASK
Number of Channel..... :	1
Operating Temperature Range..... :	0°C ~ 40 °C

Rated power supply	Voltage and Frequency	
	☐	AC: 220 – 240 V, 50/60 Hz
	☐	AC: 110 – 130 V, 50/60 Hz
	☒	DC: 12V/24V 1.5A
	☐	Battery: 12 Vdc
Mounting position..... :	☐	Table top equipment
	☐	Wall/Ceiling mounted equipment
	☐	Floor standing equipment
	☐	Hand-held equipment
	☒	Other: vehicle-mounted equipment
Test perimeter..... :	Product Name: MOBILE COMPITER Model:MEMOR 10 FCC ID: U4GDL35US IC:3862E-DL35US	

1.2 Antenna Information

Antenna model / type number.....:	N/A		
Antenna serial number	N/A		
Antenna Delivery	☒	1TX + 1RX	
	☐	2TX + 2RX	
	☐	Others:.....	
Antenna technology.....:	☒	SISO	
	☐	MIMO	☐ CDD
			☐ Beam-forming
Antenna Type.....:	☐	External	☐ Dipole
			☐ Sectorized
	☒	Internal	☐ Ceramic Chip
			☐ PIFA
			☐ PCB
			☒ Others: Coil antenna
Antenna Gain	N/A		

1.3 Channel List

Working Frequency of Each Channel:							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
01	130.0 kHz	--	--	--	--	--	--
--	--	--	--	--	--	--	--

Note: The General Description of the Item , antenna information and Channel List for the EUT in clause 1 are provided and confirmed by the client.

2 DESCRIPTION OF TEST SETUP

2.1 Operating mode(s) used for tests

During the tests the following operating mode(s) has(have) been used.

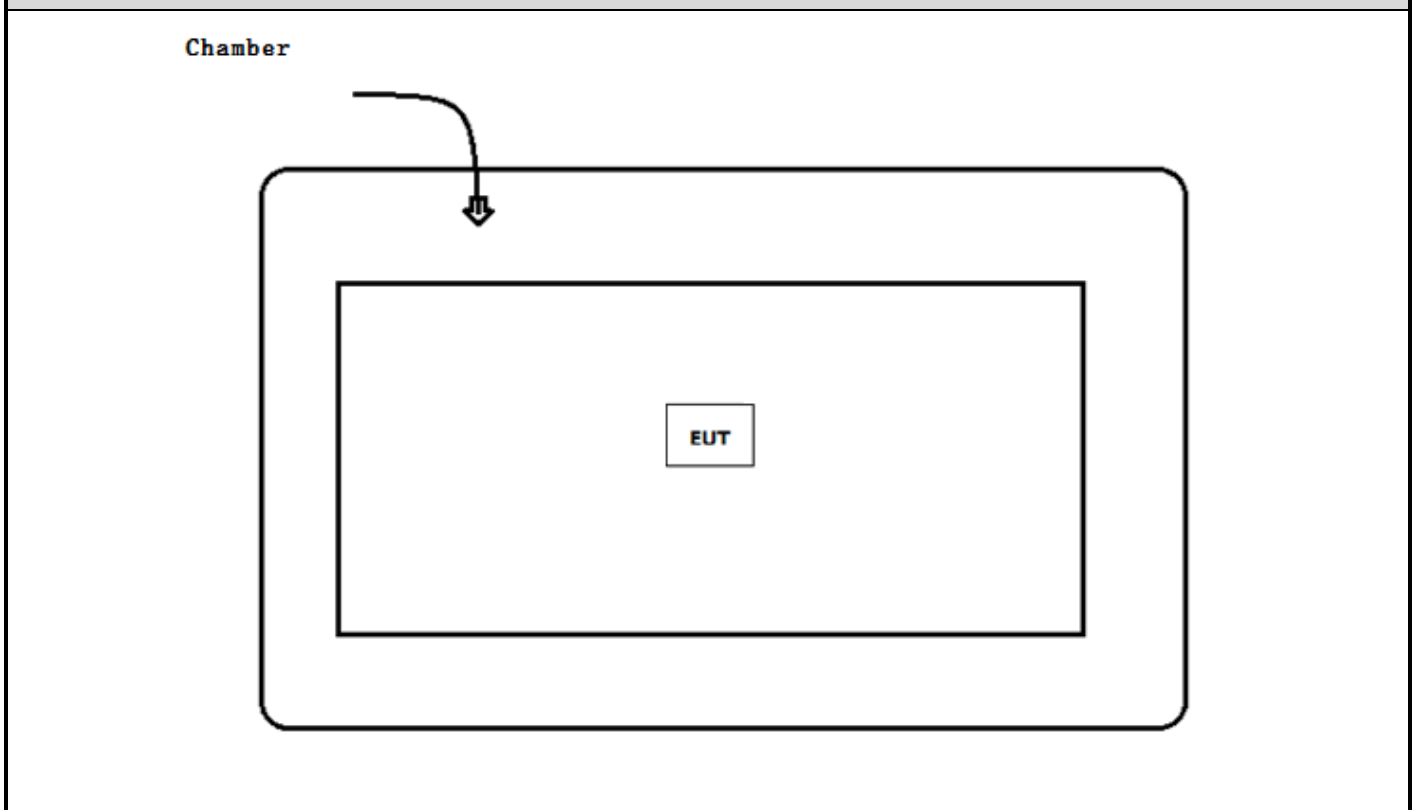
Test Mode For WPT	Mode 1: Transmit
-------------------	------------------

2.2 Auxiliary equipment / Test software for the EUT

Auxiliary equipment	Type / Version	Manufacturer	Supplied by
N/A	N/A	N/A	N/A
software	Type / Version	Manufacturer	Supplied by
N/A	N/A	N/A	N/A

2.3 Test Configuration / Block diagram used for tests

Test setup Diagram- Radiated Test



2.4 Testing process

1	Setup the EUT as shown in Section 2.3.
2	Turn on the power of equipment.
3	Verify that the EUT works properly.

Note: We use the mobile phone provided by the customer as the load, we have verified the charging test under each power, and the worst state is placed in the report.

3 VERDICT SUMMARY SECTION

This chapter presents an overview of standards and results. Refer to the next chapters for details of measured test results and applied test levels.

3.1 Standards

Standard	Year	Description
FCC CFR Title 47 Part 15 Subpart C	2021	Intentional Radiators
ANSI C63.10	2013	American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices

3.2 Deviation(s) from the Standard(s) / Test Specification(s)

The following deviation(s) was / were made from the published requirements of the listed standards: N/A.

(Please define the deviations from the standard(s) if applicable)

3.3 Overview of results

Requirement – Test case	Basic standard(s)	Verdict	Remark
Conducted Emission	FCC CFR Title 47 Part 15 Subpart C Section 15.207	N/A	---
Field Strength of Spurious	FCC CFR Title 47 Part 15 Subpart C Section 15.209	PASS	---
Channel Bandwidth	FCC CFR Title 47 Part 15 Subpart C Section 15.215(c)	PASS	---
Antenna Requirement	FCC CFR Title 47 Part 15 Subpart C: Section 15.203	PASS	---

3.4 Test Facility

USA : FCC Designation Number: CN1199

4 TEST RESULTS

4.1 AC Power Line Conducted Emission

VERDICT: N/A

4.1.1 Limit

Standard	FCC Part 15 Subpart C Paragraph 15.207	
Frequency range [MHz]	Limit: QP [dB(μV) ¹⁾]	Limit: AV [dB(μV) ¹⁾]
0,15 - 0,50	66 - 56 ²⁾	56 - 46 ²⁾
0,50 - 5,0	56	46
5,0 - 30	60	50

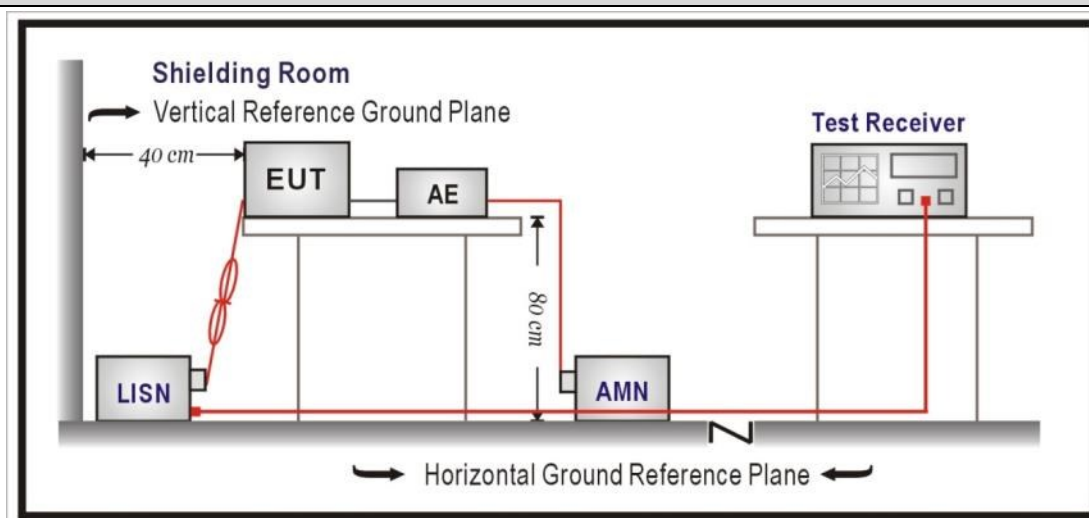
¹⁾ At the transition frequency, the lower limit applies.

²⁾ The limit decreases linearly with the logarithm of the frequency.

NOTE 1: The exclusion band for transmitters shall be considered for transmitters operating at frequencies below 30 MHz.

NOTE 2: Where the AC output port is directly connected (or via a circuit breaker) to the AC power input port of the EUT the AC power output port need not to be tested.

4.1.2 Test Setup



4.1.3 Test Procedure

	References Rule	Chapter	Item
☒	ANSI C63.10-2013	6.2	Standard test method for ac power-line conducted emissions from unlicensed wireless devices

4.1.4 Test Data

Note : The product is DC powered, no testing required for evaluation.

4.2 Radiated emission**VERDICT: PASS****4.2.1 Limit**

Standard			
FCC Part 15 Subpart C Paragraph 15.209			
Frequency (MHz)	Field strength (μV/m)	Field strength (dBμV/m)	Measurement distance (m)
0.009 - 0.49	2400/F(kHz)	48.5 – 13.8	300 _(Note 1)
0.49 - 1.705	24000/F(kHz)	33.8 - 23	30 _(Note 1)
1.705 - 30	30	29.5	30 _(Note 1)
30 - 88	100	40	3 _(Note 2)
88 - 216	150	43.5	3 _(Note 2)
216 - 960	200	46	3 _(Note 2)
Above 960	500	54	3 _(Note 2)

Note 1: The tighter limits apply at the band edges.

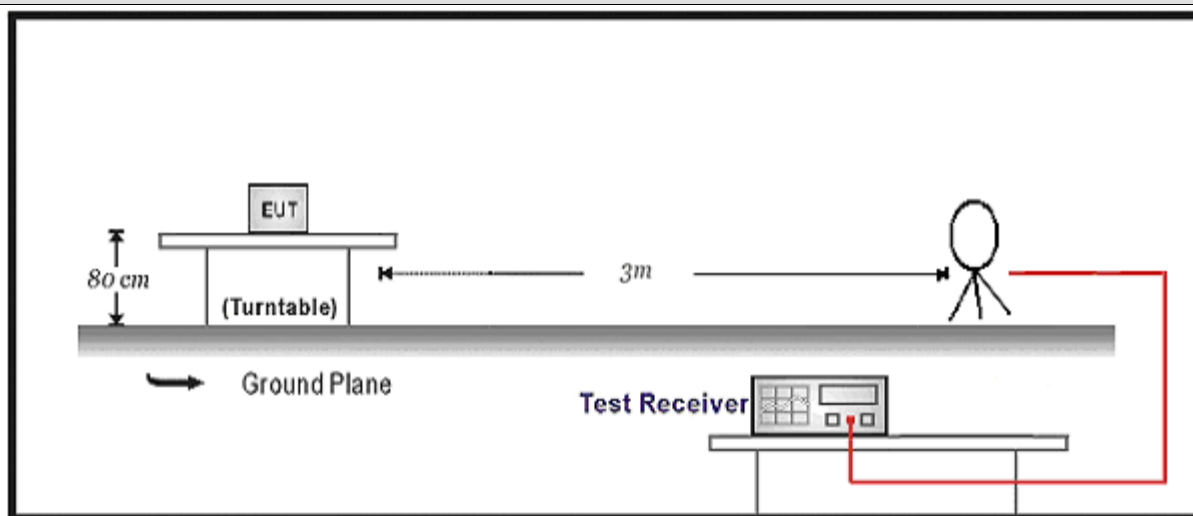
Note 2: Measurements were performed at 10m and the data was extrapolated to the specified measurement distance of 300m using the square of an inverse linear distance extrapolation factor (40 dB/decade) as specified in §15.31(f)(2).
 Extrapolation Factor = $40 \log_{10}(300/10) = 59\text{dB}$ for example.

Measurements were performed at 10m and the data was extrapolated to the specified measurement distance of 30m using the square of an inverse linear distance extrapolation factor (40 dB/decade) as specified in §15.31(f)(2).
 Extrapolation Factor = $40 \log_{10}(30/10) = 19\text{dB}$ for example.

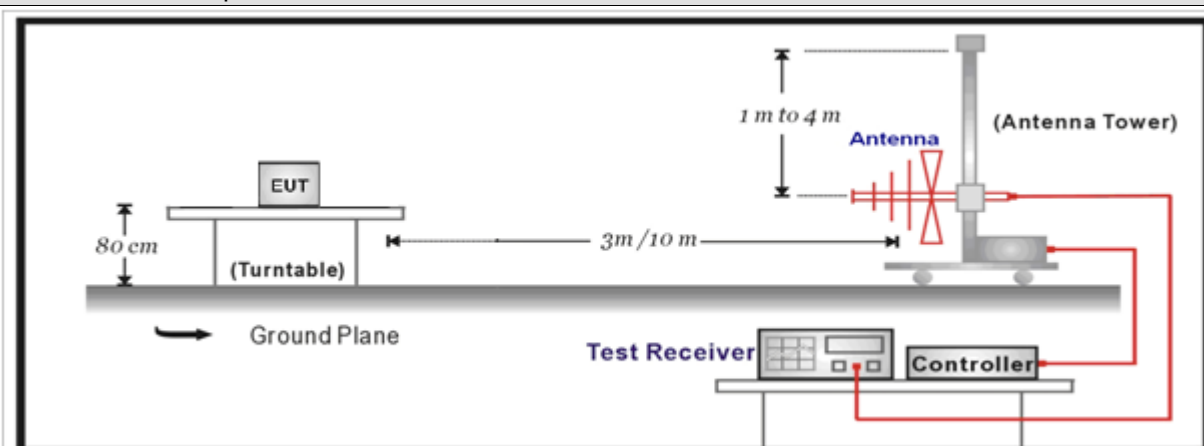
Note 3: All measurements were performed using a loop antenna. The antenna was positioned in three orthogonal positions (X front, Y side, Z top) and the position with the highest emission level was recorded.

4.2.2 Test Setup

Below 30MHz Test Setup:



30MHz-1GHz Test Setup:

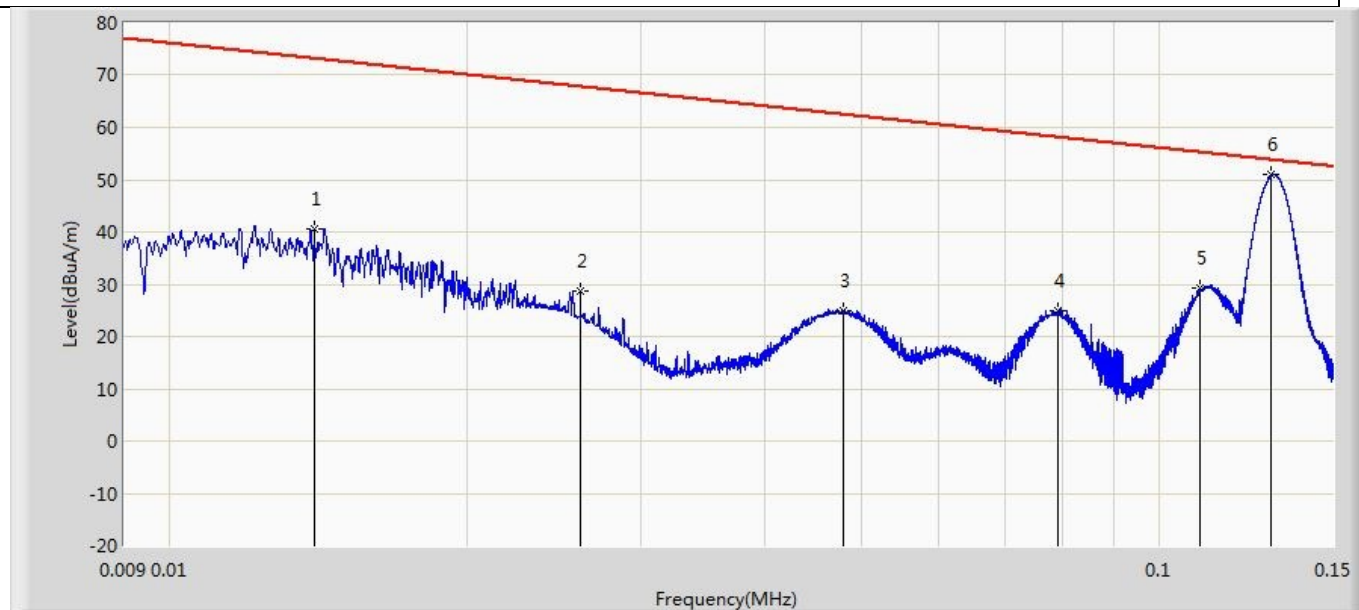


4.2.3 Test Procedure

	References Rule	Chapter	Description
☒	ANSI C63.10	11.12	Emissions in restricted frequency bands
☒	☒ ANSI C63.10	11.12.1	Radiated emission measurements
☒	☒ ANSI C63.10	11.12.2.7	Radiated spurious emission test
☒	☒ ANSI C63.10	6.4	Radiated emissions from unlicensed wireless devices below 30 MHz
☒	☒ ANSI C63.10	6.5	Radiated emissions from unlicensed wireless devices in the frequency range of 30 MHz to 1000 MHz
☐	☐ ANSI C63.10	6.6	Radiated emissions from unlicensed wireless devices above 1 GHz

4.2.4 Test Data

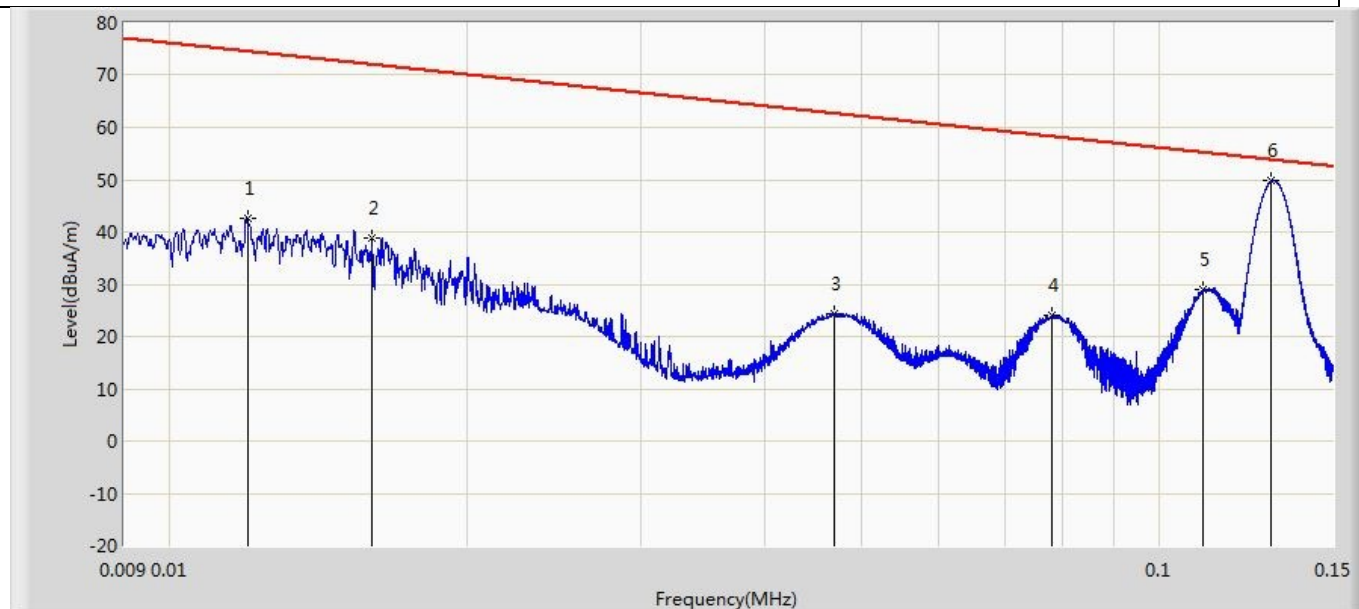
Profile: 2270660R	Page No.: 1
Engineer: Yuliu	
Site: AC2	Time: 2022/08/12 - 13:51
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: RF(0.002270660RMHz)	Polarity: Horizontal
EUT: DL36VSD	Power: DC 12V
Note: Mode 1: Transmit	



No	Mark	Frequency (MHz)	Measure Level (dBuA/m)	Reading Level (dBuA)	Over Limit (dB)	Limit (dBuA/m)	Factor (dB)	Type
1		0.014	40.532	19.345	-32.633	73.164	21.187	PK
2		0.026	28.572	7.013	-39.218	67.790	21.559	PK
3		0.048	24.910	2.958	-37.558	62.468	21.952	PK
4		0.079	24.882	2.964	-33.261	58.143	21.918	PK
5		0.110	29.272	7.390	-25.997	55.269	21.882	PK
6	*	0.130	50.970	29.110	-2.849	53.819	21.860	PK

Note: Mark 6 is the fundamental emission.

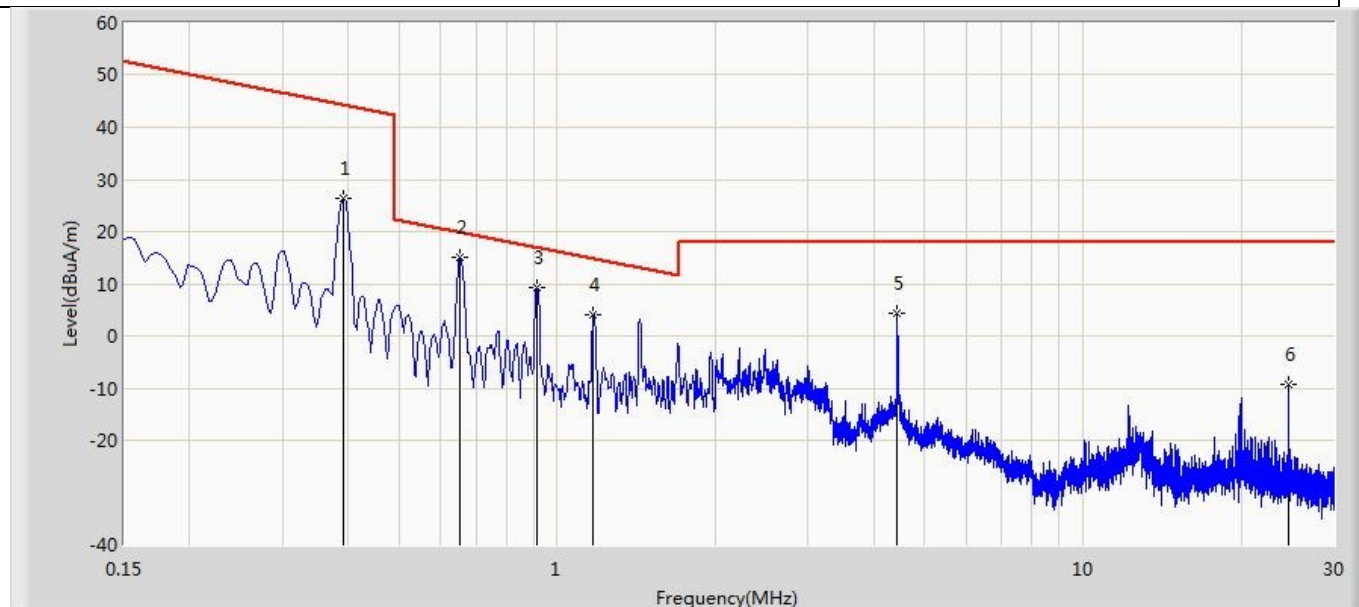
Profile: 2270660R	Page No.: 3
Engineer: Yuliu	
Site: AC2	Time:2022/08/12 - 13:53
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: RF(0.002270660RMHz)	Polarity: Vertical
EUT: DL36VSD	Power: DC 12V
Note: Mode 1: Transmit	



No	Mark	Frequency (MHz)	Measure Level (dBuA/m)	Reading Level (dBuA)	Over Limit (dB)	Limit (dBuA/m)	Factor (dB)	Type
1		0.012	42.546	21.921	-31.957	74.503	20.625	PK
2		0.016	38.964	18.215	-33.042	72.005	20.748	PK
3		0.047	24.347	2.894	-38.303	62.651	21.453	PK
4		0.078	23.966	2.547	-34.287	58.253	21.419	PK
5		0.111	29.020	7.639	-26.171	55.190	21.381	PK
6	*	0.130	49.731	28.371	-4.088	53.819	21.360	PK

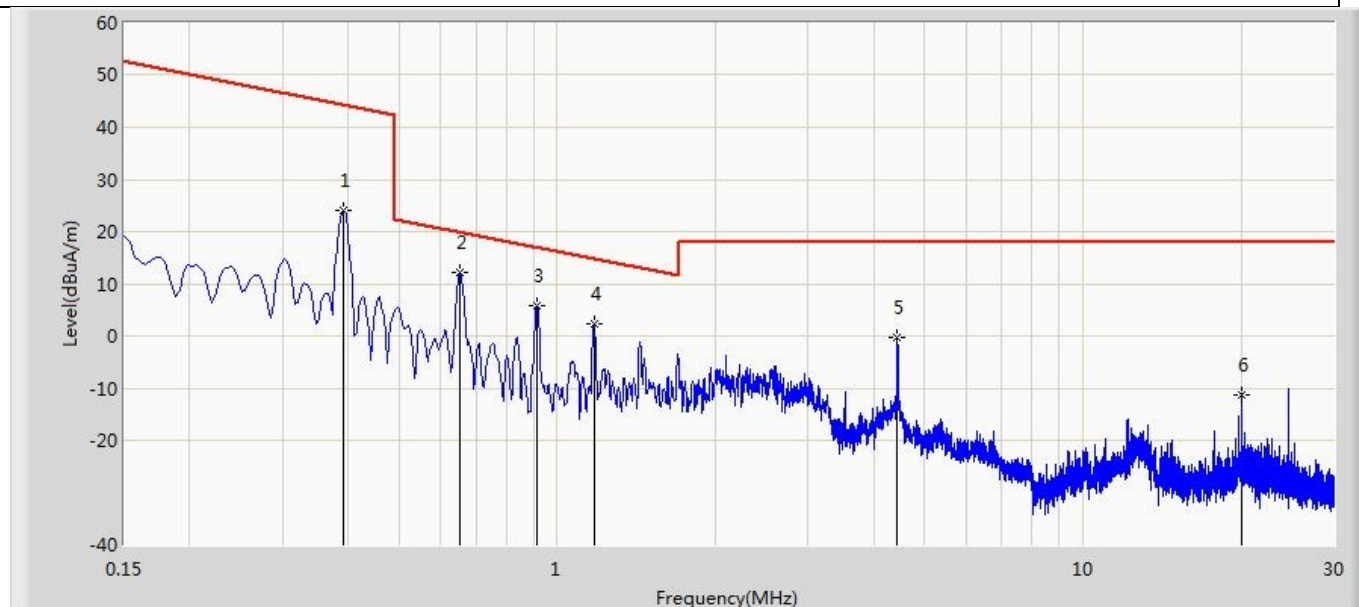
Note: Mark 6 is the fundamental emission.

Profile: 2270660R	Page No.: 2
Engineer: Yuliu	
Site: AC2	Time: 2022/08/12 - 13:55
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: RF(0.002270660RMHz)	Polarity: Horizontal
EUT: DL36VSD	Power: DC 12V
Note: Mode 1: Transmit	



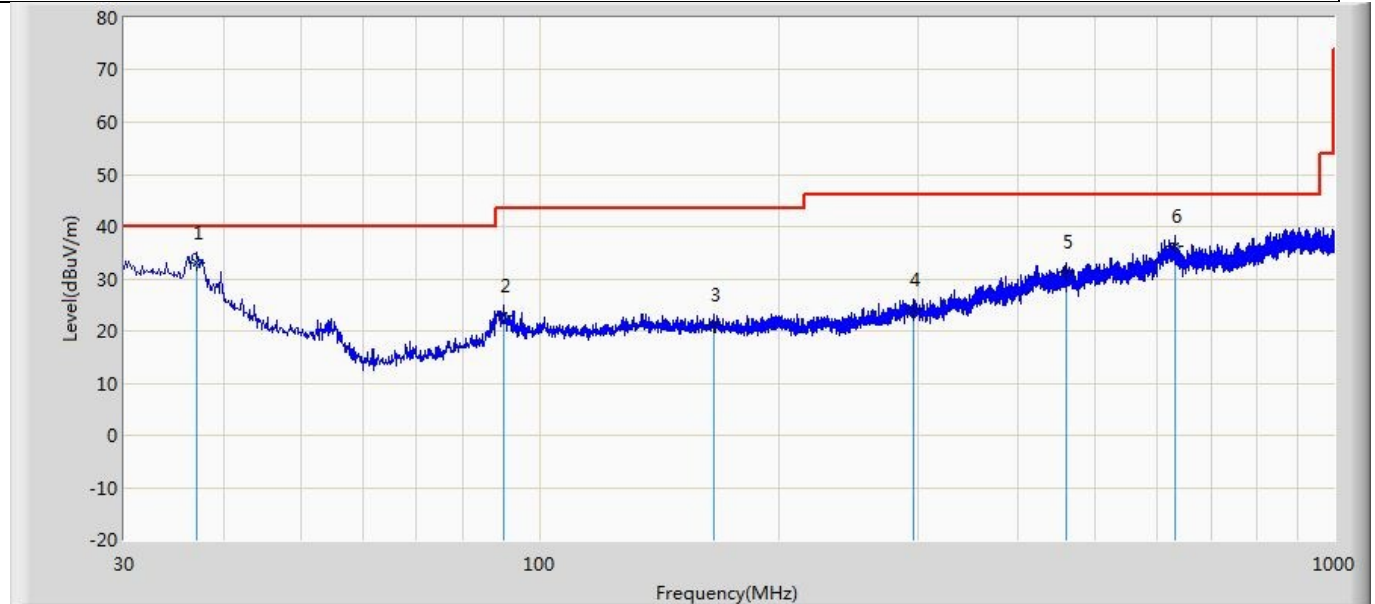
No	Mark	Frequency (MHz)	Measure Level (dBuA/m)	Reading Level (dBuA)	Over Limit (dB)	Limit (dBuA/m)	Factor (dB)	Type
1		0.393	26.324	4.734	-17.891	44.215	21.590	PK
2	*	0.654	15.044	-5.958	-4.755	19.799	21.002	PK
3		0.915	9.332	-10.866	-7.559	16.891	20.198	PK
4		1.172	4.001	-16.110	-10.745	14.747	20.111	PK
5		4.426	4.278	-16.381	-13.722	18.000	20.659	PK
6		24.582	-9.271	-30.375	-27.271	18.000	21.104	PK

Profile: 2270660R	Page No.: 4
Engineer: Yuliu	
Site: AC2	Time:2022/08/12 - 13:55
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: RF(0.002270660RMHz)	Polarity: Vertical
EUT: DL36VSD	Power: DC 12V
Note: Mode 1: Transmit	



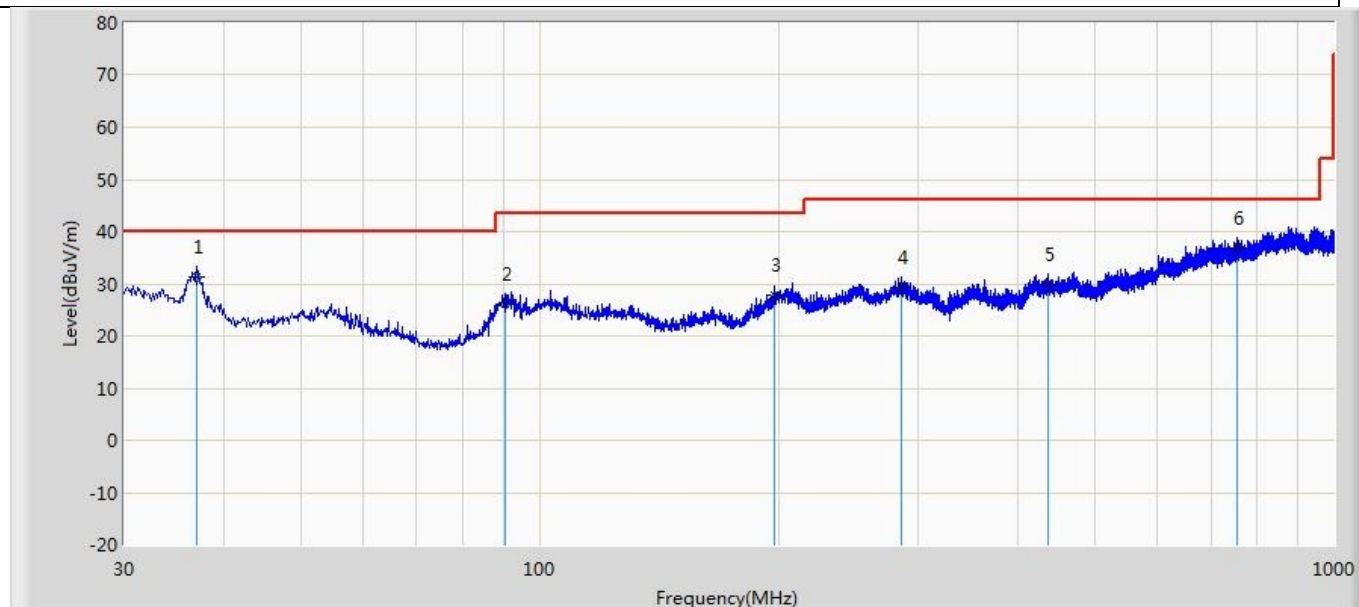
No	Mark	Frequency (MHz)	Measure Level (dBuA/m)	Reading Level (dBuA)	Over Limit (dB)	Limit (dBuA/m)	Factor (dB)	Type
1		0.393	23.964	2.874	-20.251	44.215	21.090	PK
2	*	0.654	12.237	-8.265	-7.562	19.799	20.502	PK
3		0.915	5.742	-13.956	-11.149	16.891	19.698	PK
4		1.176	2.202	-17.413	-12.516	14.717	19.614	PK
5		4.419	-0.165	-20.325	-18.165	18.000	20.160	PK
6		20.000	-11.234	-31.023	-29.234	18.000	19.789	PK

Profile: 2270660R	Page No.: 5
Engineer: Neil Liu	
Site: AC3	Time: 2022/08/12 - 13:59
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: AC3_3m (30-1000MHz)	Polarity: Horizontal
EUT: DL36VSD	Power: DC 12V
Note: Mode 1: Transmit	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	37.033	32.983	7.893	-7.017	40.000	25.090	QP
2		90.019	22.972	9.387	-20.528	43.500	13.585	QP
3		165.800	21.123	3.728	-22.377	43.500	17.395	QP
4		295.780	24.158	3.626	-21.842	46.000	20.532	QP
5		459.467	31.172	4.285	-14.828	46.000	26.886	QP
6		631.279	36.143	6.133	-9.857	46.000	30.011	QP

Profile: 2270660R	Page No.: 6
Engineer: Neil Liu	
Site: AC3	Time: 2022/08/12 - 14:00
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: AC3_3m (30-1000MHz)	Polarity: Vertical
EUT: DL36VSD	Power: DC 12V
Note: Mode 1: Transmit	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	37.033	31.253	10.106	-8.747	40.000	21.147	QP
2		90.625	26.113	8.907	-17.387	43.500	17.206	QP
3		197.568	27.710	4.850	-15.790	43.500	22.861	QP
4		285.837	29.386	4.264	-16.614	46.000	25.122	QP
5		437.158	29.897	3.706	-16.103	46.000	26.190	QP
6		756.894	36.950	5.691	-9.050	46.000	31.259	QP

Note 1: " * ", means this data is the worst emission level.

Note 2: Measurement Level = Reading Level + Factor(Probe+Cable-Amp).

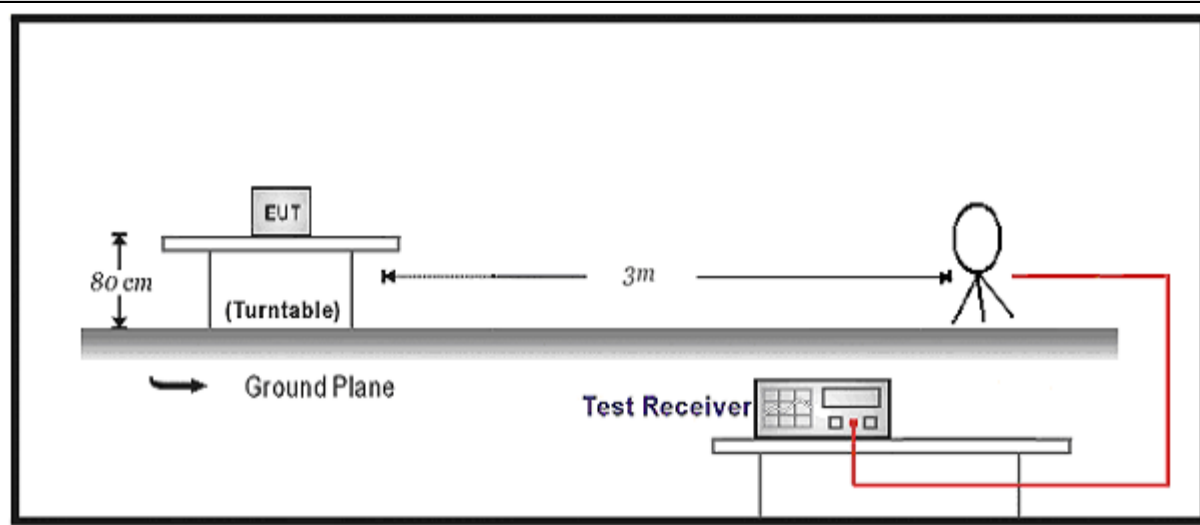
Note 3: The orthogonal orientations (x/y/z) of the shielded loop antenna are evaluated, shown in the report is the worst data.

Note 4: dBμA/m = dBμV/m – 51.5

4.3 20dB Bandwidth**VERDICT: PASS****4.3.1 Limit****Standard**

FCC Part 15 Subpart C

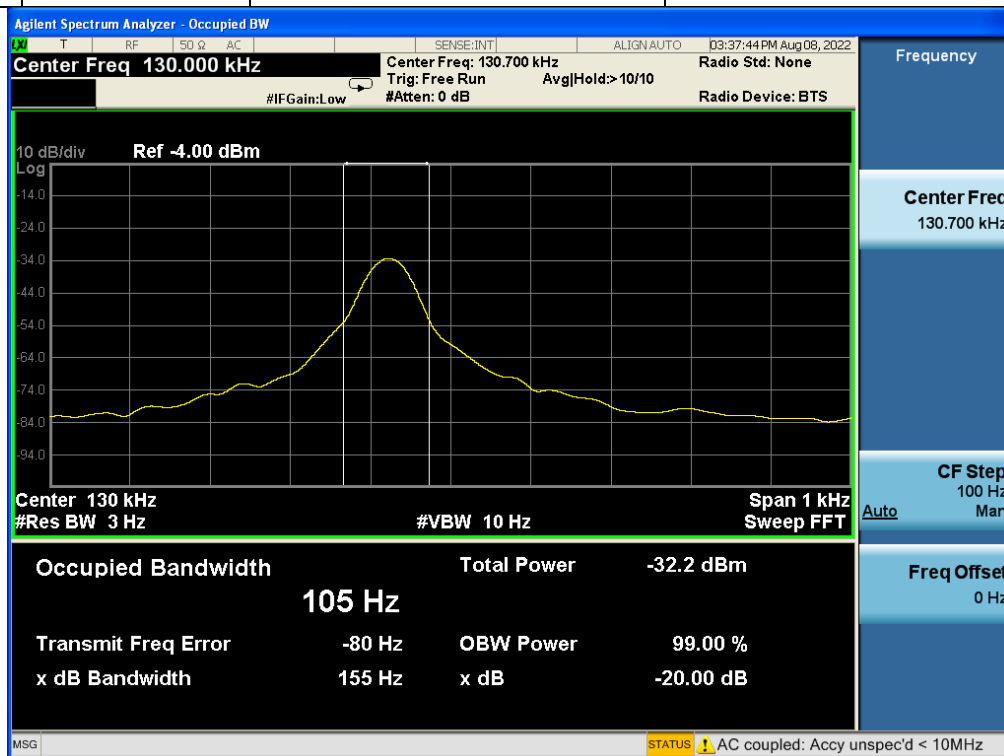
Intentional radiators operating under the alternative provisions to the general emission limits, as contained in §§15.215(c), must be designed to ensure that the 20 dB bandwidth of the emission, or whatever bandwidth may otherwise be specified in the specific rule section under which the equipment operates, is contained within the frequency band designated in the rule section under which the equipment is operated.

4.3.2 Test Setup**4.3.3 Test Procedure**

The bandwidth of the fundamental frequency was measured by spectrum analyzer with the RBW 1%~5% of 20dBc bandwidth and the VBW three times of the RBW. The 20dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 20dB.

4.3.4 Test Data

Mode	Test Freq. (kHz)	20dB Occupied Bandwidth (Hz)	99% Occupied Bandwidth (Hz)	Result
1	130.0	155	105	Pass



4.4 Antenna Requirement**VERDICT: PASS****4.4.1 Limit:**

Standard	FCC Part 15 Subpart C Paragraph 15.203
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An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible LE 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 shall be considered sufficient to comply with the provisions of this section. 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 any electrical connector is prohibited. This requirement does not apply to carrier current devices or to devices operated under the provisions of §15.211, §15.213, §15.217, §15.219, or §15.221. Further, this requirement does not apply to intentional radiators that must be professionally installed by LE, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with §15.31(d), must be measured at the installation site. However, the installer shall be responsible LE for ensuring that the proper antenna is employed so that the limits in this part are not exceeded.

4.4.2 Antenna Connector Construction:

☒	The use of a permanently attached antenna
☐	The antenna use of a unique coupling to the intentional radiator
☐	The use of a nonstandard antenna jack or any electrical connector
Please refer to the attached document "Internal Photograph" to show the antenna connector.	

5 TEST SETUP PHOTO AND EUT PHOTO

Remark: The test setup photo and EUT Photo pby LEase see appendix.

_____ The End _____