

TEST REPORT

Report No.	CISRR241024143
Project No.	CISR241024143
FCC ID	2BE3U-D1
Applicant	CND Electronic Technology (shenzhen) Co.,Ltd
Address	5th Floor,(A)CD,XingHua Building No.7,Naihai Road, Nanshan District, Shenzhen, China
Manufacturer	CND Electronic Technology (shenzhen) Co.,Ltd
Address	5th Floor,(A)CD,XingHua Building No.7,Naihai Road, Nanshan District, Shenzhen, China
Product Name	Decoder
Trade Mark	
Model/Type reference	D1
Listed Model(s)	D1 Plus, D2, D3, D5, D6, D8, D10
Standard	47 CFR Part 15, Subpart B
Test date	October 24, 2024 to October 29, 2024
Issue date	October 30, 2024
Test result	Complied



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Approved by: Genry Long

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1. REPORT VERSION

Version No.	Issue date	Description
00	October 30, 2024	Original

2. TEST DESCRIPTION

No.	Test Item	Standard Requirement	Result
1	Conducted emissions on AC mains	47 CFR Part 15, Subpart B	Pass
2	Radiated emissions (Below 1GHz)	47 CFR Part 15, Subpart B	Pass

Note:

- The measurement uncertainty is not included in the test result.

3. SUMMARY

3.1. Product Description

Main unit information:	
Product Name:	Decoder
Trade Mark:	
Model No.:	D1
Listed Model(s):	D1 Plus, D2, D3, D5, D6, D8, D10
Power supply:	Input:AC 100-240V,50/60Hz,120W Max,2A Output:DC 12V,2A
Accessory unit information:	
Battery information:	N/A

3.2. Modification of EUT

No modifications are made to the EUT during all test items.

3.3. Deviation from standards

None

3.4. Testing Site

Laboratory Name	Shenzhen Bangce Testing Technology Co., Ltd.
Laboratory Location	101, building 10, Yunli Intelligent Park, Shutianpu community, Matian Street, Guangming District, Shenzhen, Guangdong, China
Contact information	Tel: 86-755-2319 6848, email: service@cis-cn.net Website: http://www.cis-cn.net/
FCC registration number	736346
FCC designation number	CN1372

4. TEST CONFIGURATION

4.1. Descriptions of test mode

No	Test mode	Description
TM1	Working mode	Keep The EUT in working full load mode

4.2. Environmental conditions

Type	Requirement
Temperature:	15~35°C
Relative Humidity:	25~75%
Air Pressure:	860~1060mbar

4.3. Support unit used in test configuration

The EUT has been associated with peripherals and configuration operated in a manner tended to maximize its emission characteristics in a typical application.

The following peripheral devices and interface cables were connected during the measurement:

Item	Equipment name	Trade Name	Model No.
1	Adapter	CND Electronic Technology (shenzhen) Co.,Ltd	FX240-120200K
2	computer monitors	DELL	E2423H
3	Phone	NZONE	SP100
4	earphones	earphones	earphones

4.4. Equipment Used during the Test

Conducted emissions on AC mains						
Item	Equipment name	Manufacturer	Model	Serial No.	Calibration date	Due date
1	EMI Test Receiver	Rohde&schwarz	ESCI7	100853	2024-01-08	2025-01-07
2	Artificial power network	Schwarzbeck	NSLK812 7	8127-01096	2024-01-08	2025-01-07
3	8-wire Impedance Stabilization Network	Schwarzbeck	NTFM 8158	8158-00337	2024-01-08	2025-01-07
4	Artificial power network	Schwarzbeck	ENV216	/	2024-01-08	2025-01-07

Radiated emissions (Below 1GHz)						
Item	Equipment name	Manufacturer	Model	Serial No.	Calibration date	Due date
1	EMI Test Receiver	Rohde&schwarz	ESCI7	100853	2024-01-08	2025-01-07
2	Broadband antenna	schwarabeck	VULB916 3	9163-1436	2024-01-08	2025-01-07
3	Amplifier	Tonscend	TAP9K3G 40	AP23A806027 0	2024-01-08	2025-01-07

5. TEST RESULTS

5.1. Emission Test Results (EMI)

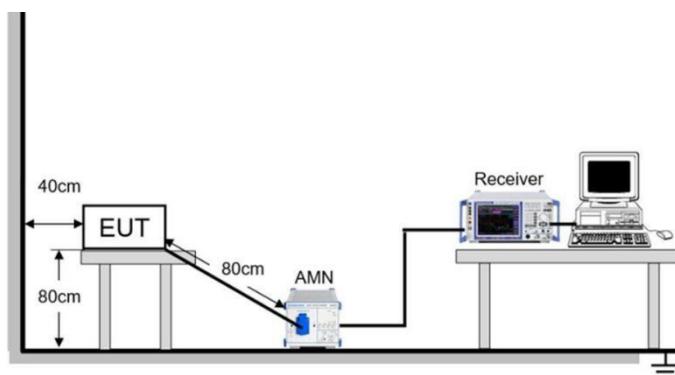
5.1.1. Conducted emissions on AC mains

Test Requirement:	15.107, Class B		
Test Limit:	Frequency of emission (MHz)		Conducted limit (dB μ V)
			Quasi-peak
	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 Method:	ANSI C63.4-2014		
Procedure:	1. The EUT was setup according to ANSI C63.4:2014 2. The EUT was placed on a plat form of nominal size, 1 m by 1.5 m, raised 80 cm above the conducting ground plane. The vertical conducting plane was located 40 cm to the rear of the EUT. All other surfaces of EUT were at least 80 cm from any other grounded conducting surface. 3. The EUT and simulators are connected to the main power through a line impedance stabilization network (LISN). The LISN provides a 50ohm / 50uH coupling impedance for the measuring equipment. 4. The peripheral devices are also connected to the main power through a LISN. (Please refer to the block diagram of the test setup and photographs) 5. Each current-carrying conductor of the EUT power cord, except the ground (safety) conductor was individually connected through a LISN to the input power source. 6. The excess length of the power cord between the EUT and the LISN receptacle were folded back and forth at the center of the lead to form a bundle not exceeding 40 cm in length. 7. Conducted emissions were investigated over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9 kHz. During the above scans, the emissions were maximized by cable manipulation.		

5.1.1.1. E.U.T. Operation

Operating Environment:					
Temperature:	23 °C	Humidity:	55.3 %	Atmospheric Pressure:	102 kPa
Pre test mode:	TM1				
Final test mode:	TM1				

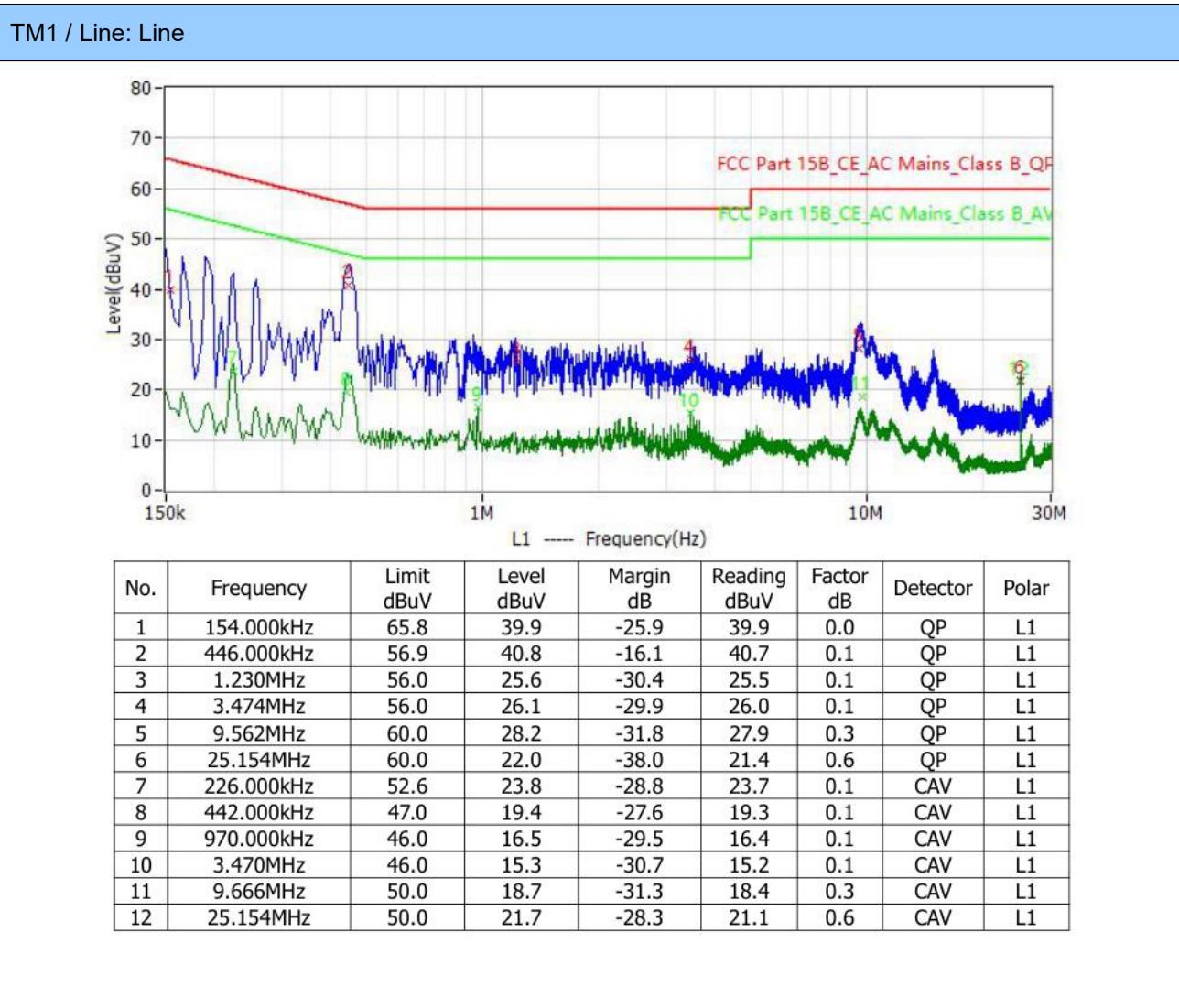
5.1.1.2. Test Setup Diagram



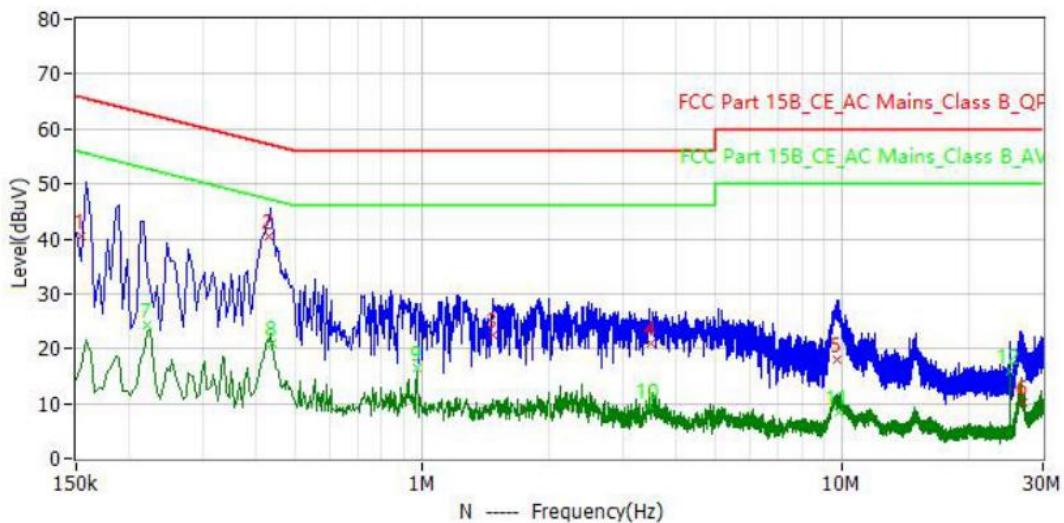
5.1.1.3. Test Result

Pass

5.1.1.4. Test Data



TM1 / Line: Neutral



No.	Frequency	Limit dBuV	Level dBuV	Margin dB	Reading dBuV	Factor dB	Detector	Polar
1	154.000kHz	65.8	40.4	-25.4	40.4	0.0	QP	N
2	430.000kHz	57.3	40.5	-16.8	40.4	0.1	QP	N
3	1.474MHz	56.0	22.4	-33.6	22.3	0.1	QP	N
4	3.502MHz	56.0	21.1	-34.9	21.0	0.1	QP	N
5	9.690MHz	60.0	18.0	-42.0	17.7	0.3	QP	N
6	26.878MHz	60.0	10.1	-49.9	9.4	0.7	QP	N
7	222.000kHz	52.7	24.3	-28.4	24.3	0.0	CAV	N
8	438.000kHz	47.1	21.0	-26.1	20.9	0.1	CAV	N
9	970.000kHz	46.0	16.5	-29.5	16.4	0.1	CAV	N
10	3.466MHz	46.0	9.5	-36.5	9.4	0.1	CAV	N
11	9.758MHz	50.0	8.5	-41.5	8.2	0.3	CAV	N
12	25.154MHz	50.0	16.0	-34.0	15.4	0.6	CAV	N

Note:

Level= Read Level+ Cable Loss+ LISN Factor

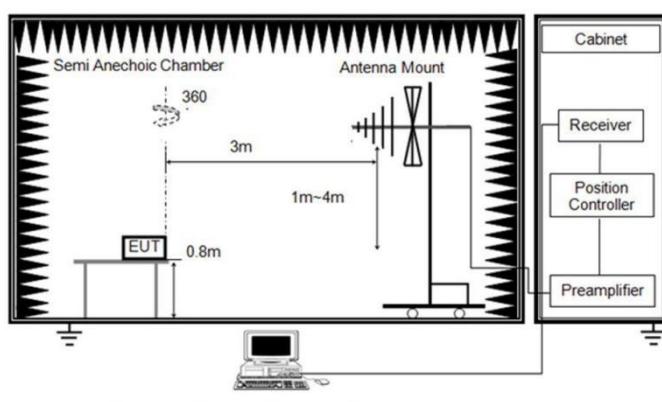
5.1.2. Radiated emissions (Below 1GHz)

Test Requirement:	15.109, Class B				
Test Limit:	Except for Class A digital devices, the field strength of radiated emissions from unintentional radiators at a distance of 3 meters shall not exceed the following values:				
Frequency of emission (MHz)		Field strength @3m		Field strength @10m	
		(uV/m)	(dBuV/m)	(uV/m)	(dBuV/m)
	30 – 88	100	40	30	29.5
	88 – 216	150	43.5	45	33.1
	216 – 960	200	46	60	35.6
	Above 960	500	54	150	43.5
Test Method:	ANSI C63.4-2014				
Procedure:	An initial pre-scan was performed in the chamber using the spectrum analyser in peak detection mode. Quasi-peak measurements were conducted based on the peak sweep graph. The EUT was measured by BiConiLog antenna with 2 orthogonal polarities. Remark: Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor				

5.1.2.1. E.U.T. Operation

Operating Environment:					
Temperature:	23 °C	Humidity:	55 %	Atmospheric Pressure:	103 kPa
Pre test mode:	TM1				
Final test mode:	TM1				

5.1.2.2. Test Setup Diagram



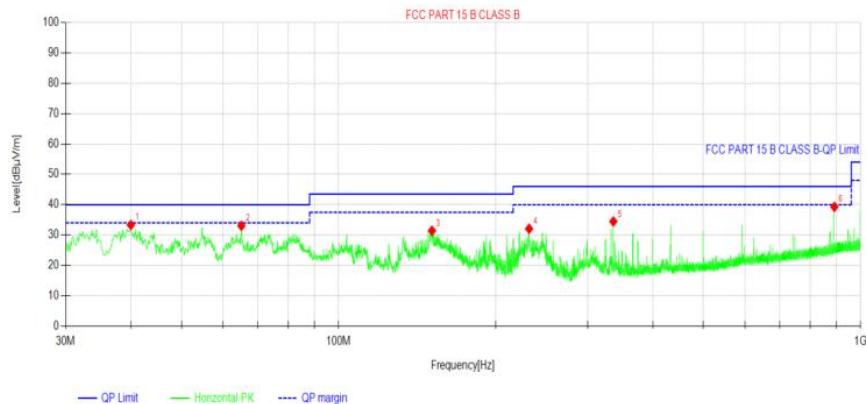
Below 1 GHz and above 30 MHz

5.1.2.3. Test Result

Pass

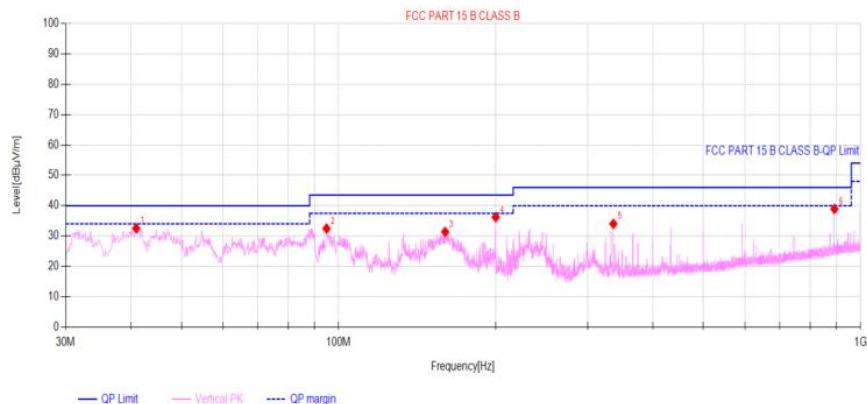
5.1.2.4. Test Data

TM1 / Polarization: Horizontal



Suspected Data List

NO.	Freq. [MHz]	Reading [dB μ V/m]	Level [dB μ V/m]	Factor [dB]	Limit [dB μ V/m]	Margin [dB]	Polarity	Verdict
1	39.992	18.70	33.31	14.61	40.00	6.69	Horizontal	PASS
2	65.1175	20.24	33.05	12.81	40.00	6.95	Horizontal	PASS
3	150.971	20.90	31.42	10.52	43.50	12.08	Horizontal	PASS
4	231.683	17.86	32.07	14.21	46.00	13.93	Horizontal	PASS
5	336.065	17.66	34.48	16.82	46.00	11.52	Horizontal	PASS
6	890.961	13.86	39.28	25.42	46.00	6.72	Horizontal	PASS

TM1 / Polarization: Vertical


Suspected Data List								
NO.	Freq. [MHz]	Reading [dB μ V/m]	Level [dB μ V/m]	Factor [dB]	Limit [dB μ V/m]	Margin [dB]	Polarity	Verdict
1	40.9621	17.75	32.54	14.79	40.00	7.46	Vertical	PASS
2	94.8025	19.59	32.46	12.87	43.50	11.04	Vertical	PASS
3	159.993	20.68	31.36	10.68	43.50	12.14	Vertical	PASS
4	199.961	22.74	36.21	13.47	43.50	7.29	Vertical	PASS
5	336.065	17.19	34.01	16.82	46.00	11.99	Vertical	PASS
6	891.058	13.50	38.92	25.42	46.00	7.08	Vertical	PASS

Note:

- 1) Level= Reading + Factor; Factor =Antenna Factor+ Cable Loss- Preamp Factor
- 2) Margin = Limit – Level